

PAMS Technical Documentation

NSM–3/3D Series Transceivers

System Module

CONTENTS

Transceiver NSM–3/3D	7
Differences between NSM–3 and NSM–3D	7
Introduction NSM–3	7
Introduction NSM–3D	7
Operation Modes	8
Interconnection Diagram	9
System Module	10
Baseband Module	10
Block Diagram	10
Technical Summary	11
External and Internal Signals and Connections	12
DC (charger) connector	12
Service connector	12
Battery connector	12
SIM card connector	13
RTC backup battery	13
Power Distribution	14
Battery charging	14
Startup Charging	15
Battery Overvoltage Protection	15
Battery Removal During Charging	17
PWM	18
Battery Identification	18
Battery Temperature	19
Supply Voltage Regulators	20
Switched Mode Supply VSIM	21
Power Up and Power Down	21
Power up with a charger	21
Power Up With The Power Switch (PWRONX)	22
Power Up by RTC	23
Power Up by IBI	23
Power Down	23
Modes of Operation	24
Acting Dead	24
Active Mode	24
Sleep Mode	24
Charging	25
Watchdog	25
Audio control	26
PCM serial interface	26
Digital Control	27
MAD2 WD1	27
Memories	35
MAD memory configuration	35

Memory	35
Program and Data Memory	35
Work Memory	35
MCU Memory Requirements	35
MCU Memory Map	35
Flash Programming	36
COBBA GJP	38
Real Time Clock	38
RTC backup battery charging	38
RF Module	39
Maximum Ratings	39
RF Characteristics	39
RF Frequency Plan	40
DC characteristics	40
Regulators	40
Power Distribution Diagram	41
RF Functional Description	42
Frequency synthesizer	43
Receiver	44
Transmitter	45
AGC strategy	46
AFC function	46
DC–compensation	47
Receiver characteristics	47
Transmitter characteristics	47
Parts list of RM7L (EDMS Issue 6.0) Layout 11 Code: 0201386	48
Parts list of RM7L (EDMS Issue 10.1) Layout 16 Code: 0201386	56
Parts list of RM7L (EDMS Issue 11.2) Layout 18 Code: 0201386	64
Parts list of RM7L (EDMS Issue 12.5) Layout 19 Code: 0201386	72
Parts list of RM7L (EDMS Issue 13.5) Layout 21 Code: 0201386	80
Parts list of RM7LD (EDMS Issue 2.1) Layout 03 Code: 0201682	88
Parts list of RM7LD (EDMS Issue 2.4) Layout 03 Code: 0201682	96
Parts list of RM7LD (EDMS Issue 3.2) Layout 05 Code: 0201682	104
Parts list of RM7LD (EDMS Issue 3.3) Layout 05 Code: 0201682	112
Hardware ID chart for NSM–3/3D System module	120

Schematic Diagrams: RM7L layout 11 HW 1120(at the back of the binder)

Connection between RF and BB modules (Version 1110 Ed. 16) layout 11	A–1
Baseband Block Interconnections (Version 1110 Edition 11) for layout 11	A–2
Circuit Diagram of Power Supply (Version 1110 Edition 17) for layout 11	A–3
Circuit Diagram of CPU Block (Version 1110 Edition 12) for layout 11	A–4
Circuit Diagram of RF Block (Version 1110 Edition 28) for layout 11	A–5
Circuit Diagram of Audio and RFI (Version 1110 Edition 15) for layout 11	A–6
Circuit Diagram of IR Module (Version 1110 Edition 10) for layout 11	A–7
Circuit Diagram of UI (Version 1110 Edition 12) for layout version 11	A–8
Layout Diagram of RM7L – Top (Version 11)	A–9
Layout Diagram of RM7L – Bottom (Version 11)	A–9
Testpoints of RM7L – Bottom (Version 11)	A–10

Schematic Diagrams: RM7L layout 16 HW 1210–1621(at the back of the binder)

Connection between RF and BB modules (Version 1410 Ed. 20) layout 16	A–11
Baseband Block Interconnections (Version 1410 Edition 18) for layout 16	A–12
Circuit Diagram of Power Supply (Version 1510 Edition 26) for layout 16	A–13
Circuit Diagram of CPU Block (Version 1410 Edition 16) for layout 16	A–14
Circuit Diagram of RF Block (Version 1410 Edition 37) for layout 16	A–15
Circuit Diagram of Audio and RFI (Version 1410 Edition 20) for layout 16	A–16
Circuit Diagram of IR Module (Version 1410 Edition 13) for layout 16	A–17
Circuit Diagram of UI (Version 1410 Edition 14) for layout version 16	A–18
Layout Diagram of RM7L – Top (Version 16)	A–19
Layout Diagram of RM7L – Bottom (Version 16)	A–19
Testpoints of RM7L – Bottom (Version 16)	A–20

Schematic Diagrams: RM7L layout 18 HW1800 (at the back of the binder)

Layout Diagram of RM7L – Top (Version 18)	A–21
Layout Diagram of RM7L – Bottom (Version 18)	A–21
Testpoints of RM7L – Bottom (Version 18)	A–22

Schematic Diagrams: RM7L layout 19 HW1903–2000 (at the back of the binder)

Connection between RF and Baseband (HW1910 Edit 4) layout 19	A–23
Baseband Block Interconnections (HW1910 Edit 4) layout 19	A–24
Circuit Diagram of Power Supply (HW1910 Edit 4) layout 19 .	A–25

Circuit Diagram of CPU Block (HW 1910 Edit 5) for layout 19	A-26
Circuit Diagram of RF Block (HW 1910 Edit 4) for layout 19 . .	A-27
Circuit Diagram of Audio and RFI (HW1910 Edit 4) layout 19	A-28
Circuit Diagram of IR Module (HW 1910 Edit 4) for layout 19 .	A-29
Circuit Diagram of UI (HW 1910 Edit 4) for layout version 19	A-30
Layout Diagram of RM7L – Top (Version 19)	A-31
Layout Diagram of RM7L – Bottom (Version 19)	A-31
Testpoints of RM7L – Bottom (Version 19)	A-32

Schematic Diagrams: RM7L layout 21 HW2100–2103 (at the back of the binder)

Connection between RF and Baseband (HW2103 Ed2) layout 21	A-33
Baseband Block Interconnections (HW2103 Edit 3) for layout 21	A-34
Circuit Diagram of Power Supply (HW2103 Edit 5) for layout 21	A-35
Circuit Diagram of CPU Block (HW2103 Edit 3) for layout 21 .	A-36
Circuit Diagram of RF Block (HW2103 Edit 5) for layout 21 . . .	A-37
Circuit Diagram of Audio and RFI (HW2103 Edit 20) layout 21	A-38
Circuit Diagram of IR Module (HW2103 Edit 17) for layout 21	A-39
Circuit Diagram of UI (HW2103 Edit 3) for layout version 21 .	A-40
Layout Diagram of RM7L – Top (Version 21)	A-41
Layout Diagram of RM7L – Bottom (Version 21)	A-41
Testpoints of RM7L (Version 21)	A-42

Schematic Diagrams: RM7LD layout 03 HW3.01–3.02 (at the back of the binder)

Connection between RF and BB modules (Version 1410 Ed. 4) layout 03	A-D1
Baseband Block Interconnections (Version 1410 Edition 4) for layout 03	A-D2
Circuit Diagram of Power Supply (Version 1510 Edition 7) for layout 03	A-D3
Circuit Diagram of CPU Block (Version 1410 Edition 04) for layout 03	A-D4
Circuit Diagram of RF Block (Version 1410 Edition 3) for layout 03	A-D5
Circuit Diagram of Audio and RFI (Version 1410 Edition 4) for layout 03	A-D6
Circuit Diagram of IR Module (Version 1410 Edition 2) for layout 03	A-D7
Circuit Diagram of UI (Version 1410 Edition 4) for layout version 03	A-D8
Layout Diagram of RM7LD – Top (Version 03)	A-D9
Layout Diagram of RM7LD – Bottom (Version 03)	A-D9
Testpoints of RM7LD – Bottom (Version 03)	A-D10

Schematic Diagrams: RM7LD layout 05 HW5.01 (at the back of the binder) . . .	
Connection between RF and BB (Version 1410 Edit 7) layout 05	A–D11
Baseband Block Interconnections (Version 1410 Edit 6) layout 05	A–D12
Circuit Diagram of Power Supply (Version 1510 Edit 8) layout 05	A–D13
Circuit Diagram of CPU Block (Version 1410 Edit 7) layout 05	A–D14
Circuit Diagram of RF Block (Version 1410 Edit 13) layout 05	A–D15
Circuit Diagram of Audio and RFI (Version 1410 Edit 4) layout 05	A–D16
Circuit Diagram of IR Module (Version 1410 Edit 2) layout 05	A–D17
Circuit Diagram of UI (Version 1410 Edit 5) for layout 05	A–D18
Layout Diagram of RM7LD – Bottom (Version 05)	A–D19
Layout Diagram of RM7LD – Top (Version 05)	A–D19
Testpoints of RM7LD (Version 05)	A–D20

Schematic Diagrams: RM7LD layout 05 HW5.02 (at the back of the binder) . . .	
Connection between RF and Baseband modules (Version 5.02 Edit 8) for layout version 05	A–D21
Baseband Block Interconnections (Version 5.02 Edit 7) layout 05	A–D22
Circuit Diagram of Power Supply (Version 5.02 Edit 9) layout 05	A–D23
Circuit Diagram of CPU Block (Version 5.02 Edit 8) layout 05	A–D24
Circuit Diagram of RF Block (Version 5.02 Edit 14) layout 05	A–D25
Circuit Diagram of Audio and RFI (Version 5.02 Edit 6) layout 05	A–D26
Circuit Diagram of IR Module (Version 5.02 Edit 3) layout 05	A–D27
Circuit Diagram of UI (Version 5.02 Edit 6) layout 05	A–D28
Layout Diagram of RM7LD – Bottom (Version 05)	A–D29
Layout Diagram of RM7LD – Top (Version 05)	A–D29
Testpoints of RM7LD (Version 05)	A–D30

Transceiver NSM–3/3D

Differences between NSM–3 and NSM–3D

The main differences are in A–cover and display module. NSM–3 and NSM–3D share the same accessories. Other differences between the phones are stated in the text. See also Product Variants –section in this manual.

Introduction NSM–3

The NSM–3 is a dual band transceiver unit designed for the GSM900 (including EGSM) and GSM1800 networks. It is both GSM900 phase 2 power class 4 transceiver (2W) and GSM1800 power class 1 (1W) transceiver.

The transceiver consists of System/RF module (RM7L), Display module (UX7) and assembly parts.

The transceiver has a full graphic display and the user interface is based on a Jack style UI with two soft keys.

An internal antenna is used, there is no connection to an external antenna.

The transceiver has a low leakage tolerant earpiece and an omnidirectional microphone located in B–cover, providing an excellent audio quality. The transceiver supports a full rate, an enhanced full rate and a half rate speech decoding.

An integrated IR link provides a connection between two NSM–3 transceivers or a transceiver and a PC (internal data), or a transceiver and a printer.

The small SIM (Subscriber Identity Module) card is located below the back cover of the phone.

Introduction NSM–3D

The NSM–3DX is a dualband radio transceiver unit for the E–GSM900 and GSM1800 networks. GSM power class is 4 and PCN power class is 1. It is a true 3 V transceiver, with user changeable A–cover and internal vibra.

The transceiver consists of System/RF module (RM7LD), Display module (UX7V) and assembly parts.

The transceiver has full graphic display and the user interface is based on Jack style UI with two soft keys.

NSM–3D phone is equipped with an internal antenna and there isn't any external antenna connector.

The transceiver has leakage tolerant earpiece and omnidirectional microphone, providing excellent audio quality. Transceiver supports full rate, enhanced full rate and half rate speech decoding.

Integrated IR link provides for connection between two NSM–3DX transceivers or a transceiver and a PC (internal data), or a transceiver and a printer.

The small SIM (Subscriber Identity Module) card is located below the back cover of the phone.

Operation Modes

There are five different operation modes:

- power off mode
- idle mode
- active mode
- charge mode
- local mode

In the power off mode only the circuits needed for power up are supplied.

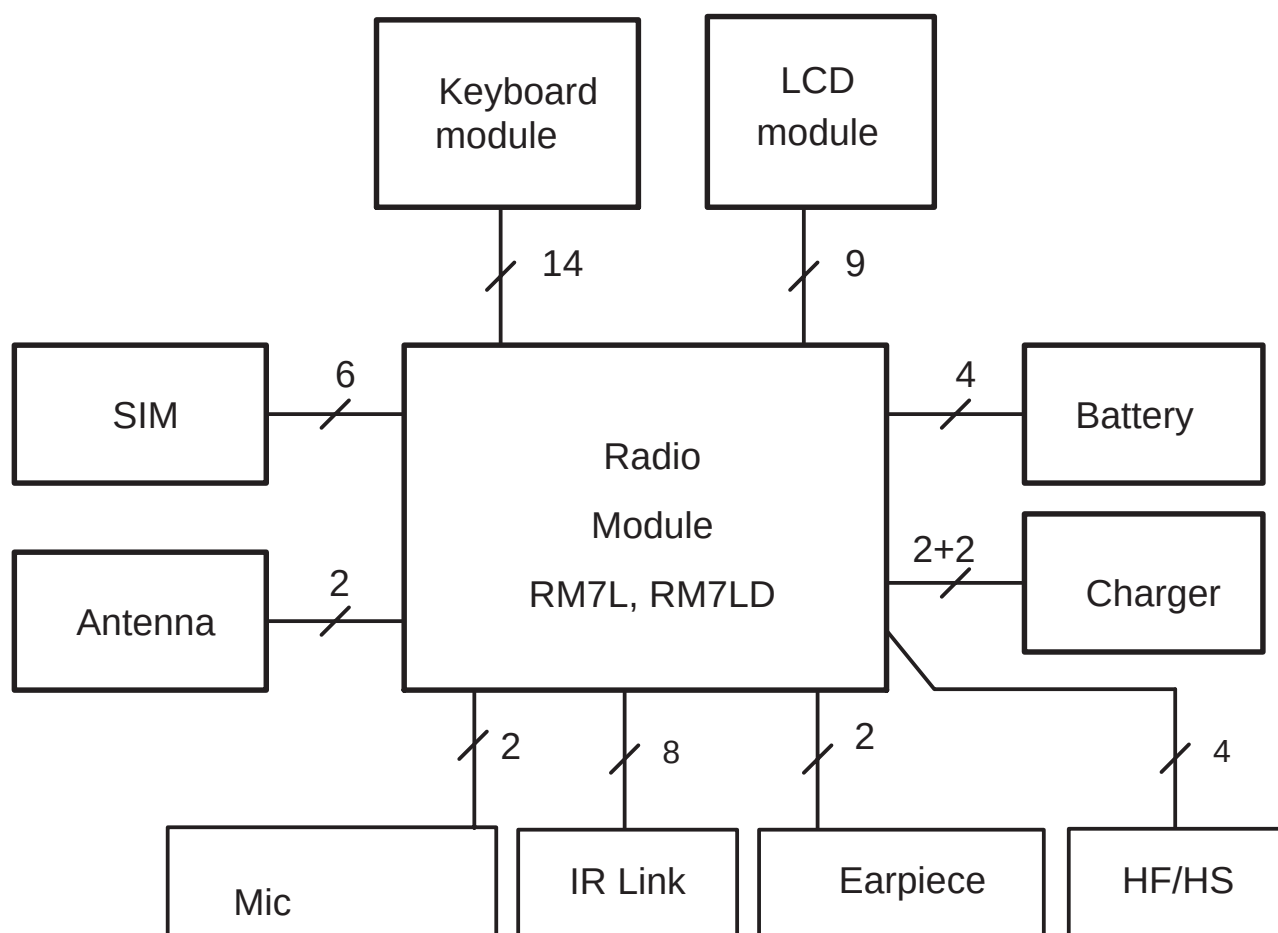
In the idle mode circuits are powered down and only sleep clock is running.

In the active mode all the circuits are supplied with power although some parts might be in the idle state part of the time.

The charge mode is effective in parallel with all previous modes. The charge mode itself consists of two different states, i.e. the fast charge and the maintenance mode.

The local mode is used for alignment and testing.

Interconnection Diagram



System Module

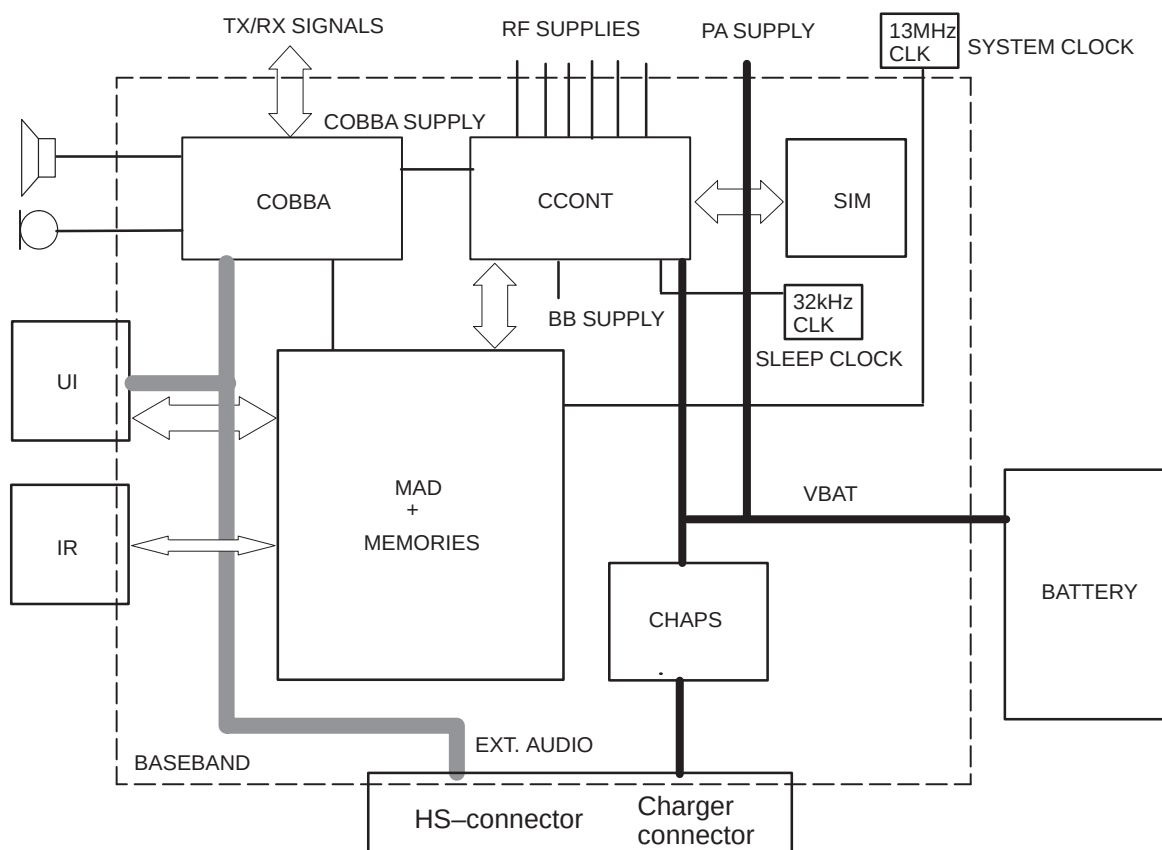
Baseband Module

The baseband architecture supports a power saving function called "sleep mode". This sleep mode shuts off the VCTCXO, which is used as system clock source for both RF and baseband. During the sleep mode the system runs from a 32 kHz crystal. The phone is waken up by a timer running from this 32 kHz clock supply. The sleeping time is determined by some network parameters. The sleep mode is entered when both the MCU and the DSP are in standby mode and the normal VCTCXO clock has been switched off.

The battery charging is controlled by a PWM signal from the CCONT. The PWM duty cycle is determined by a charging software and is fed to the CHAPS charging switch.

Standard chargers (two wires) provide coarse supply power, which is switched by the CHAPS for suitable charging voltage and current. Advanced chargers (three wires) are equipped with a control input. Three wire chargers are treated like two wire ones.

Block Diagram



Technical Summary

The baseband module consists four ASICs; CHAPS, CCONT, COBBA-GJP and MAD2WD1, which take care of the baseband functions of the engine.

The baseband is running from a 2.8V power rail, which is supplied by a power controlling ASIC CCONT. In the CCONT there are 6 individually controlled regulator outputs for RF-section and two outputs for the baseband. In addition there is one +5V power supply output (V5V). The CCONT contains also a SIM interface, which supports both 3V and 5V SIM-cards. A real time clock function is integrated into the CCONT, which utilizes the same 32kHz clock supply as the sleep clock. A backup power supply is provided for the RTC, which keeps the real time clock running when the main battery is removed. The backup power supply is a re-chargable battery. The backup time with the battery is ten minutes minimum.

The interface between the baseband and the RF section is mainly handled by a COBBA ASIC. COBBA provides A/D and D/A conversion of the in-phase and quadrature receive and transmit signal paths and also A/D and D/A conversions of received and transmitted audio signals to and from the user interface. The COBBA supplies the analog TXC and AFC signals to RF section according to the MAD DSP digital control. Data transmission between the COBBA and the MAD is implemented using serial bus for high speed signalling and for PCM coded audio signals. Digital speech processing is handled by the MAD ASIC. COBBA is a dual voltage circuit, the digital parts are running from the baseband supply VBB and the analog parts are running from the analog supply VCOBBA.

The baseband supports both internal and external microphone inputs and speaker outputs. Input and output signal source selection and gain control is done by the COBBA according to control messages from the MAD. Keypad tones, DTMF, and other audio tones are generated and encoded by the MAD and transmitted to the COBBA for decoding. A buzzer and an external vibra alert control signals are generated by the MAD with separate PWM outputs.

EMC shielding is implemented using a metallized plastic frame. On the other side the engine is shielded with PCB grounding. Heat generated by the circuitry will be conducted out via the PCB ground planes.

External and Internal Signals and Connections

This section describes the external electrical connection and interface levels on the baseband. The electrical interface specifications are collected into tables that covers a connector or a defined interface.

DC (charger) connector

DC (charger) connector is physically integrated in the same component with the accessory interface connector. DC connector has both jack and contact pads for desk stand.

Service connector

Name	Parameter	Min	Typ	Max	Unit	Remark
MBUS	Serial clock from the Prommer	0 2.0	logic low logic low	0.8 2.85	V	Prommer detection and Serial Clock for synchronous communication
FBUS_RX	Serial data from the Prommer	0 2.0	logic low logic high	0.8 2.85	V	Receive Data from Prommer to Baseband
FBUS_TX	Data acknowledge to the Prommer	0 2.0	logic low logic high	0.5 2.85	V	Transmit Data from Baseband to Prommer
GND	GND	0		0	V	Ground

The service connector is used as a flash programming interface for updating (i.e. re-programming) the flash program memory and an electrical access for services to the engine.

When the flash prommer is connected to the phone supply power is provided through the battery contacts and the phone is powered up with a pulse given to the BTEMP line.

Battery connector

The BSI contact on the battery connector is used to detect when the battery is to be removed to be able to shut down the operations of the SIM card before the power is lost if the battery is removed with power on. The BSI contact disconnects earlier than the supply power contacts to give enough time for the SIM and LCD shut down.

Name	Min	Typ	Max	Unit	Notes
VBATT	3.0	3.9	4.2	V	Battery voltage
BSI	0		2.85	V	Battery size indication Phone has 100kohm pull up resistor. SIM Card removal detection (Treshold is 2.4V@VBB=2.8V)
	67	68	69	kohm	Battery indication resistor (BLB–2)
	0	0	1	kohm	Battery indication resistor (service battery)

Name	Min	Typ	Max	Unit	Notes
BTEMP	0		1.4	V	Battery temperature indication Phone has a 100k (+-5%) pullup resistor, Battery package has a NTC pulldown resistor: 47k+-5%@+25C , B=4050+-3%
	2.1 5	10	3 20	V ms	Phone power up by battery (input) Power up pulse width
	1.9 90	100	2.85 200	V ms	Battery power up by phone (output) Power up pulse width
	0		1	kohm	Local mode initialization (in production)
BGND	0		0	V	Battery ground

SIM card connector

The SIM card connector is located on the engine board beside the battery pack.

Pin	Name	Parameter	Min	Typ	Max	Unit	Notes
4	GND	GND	0		0	V	Ground
3, 5	VSIM	5V SIM Card 3V SIM Card	4.8 2.8	5.0 3.0	5.2 3.2	V	Supply voltage
6	DATA	5V Vin/Vout 3V Vin/Vout	4.0 0 2.8 0	"1" "0" "1" "0"	VSIM 0.5 VSIM 0.5	V	SIM data Trise/Tfall max 1us
2	SIMRST	5V SIM Card 3V SIM Card	4.0 2.8	"1" "1"	VSIM VSIM	V	SIM reset
1	SIMCLK	Frequency Trise/Tfall		3.25		MHz ns	SIM clock

RTC backup battery

The RTC block in CCONT needs a power backup to keep the clock running when the phone battery is disconnected. The backup power is supplied from a rechargeable polyacene battery that can keep the clock running ten minutes minimum. The backup battery is charged from the main battery through CHAPS.

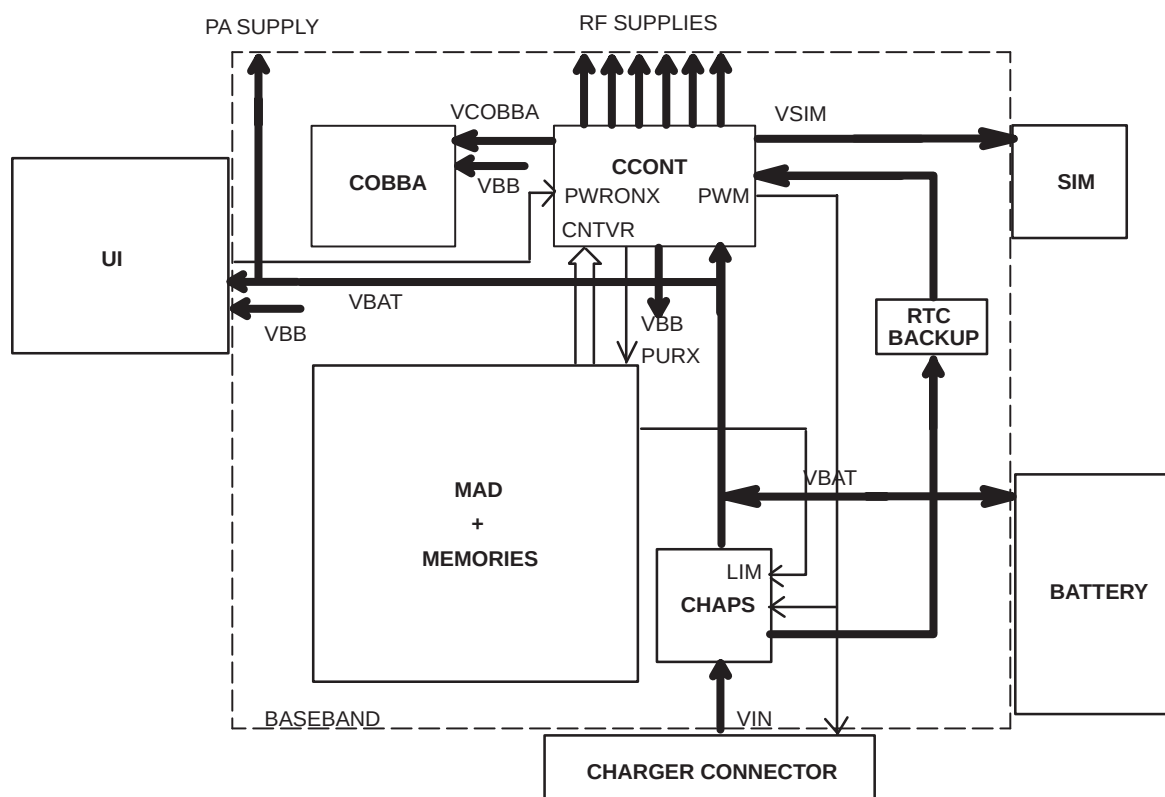
Signal	Parameter	Min	Typ	Max	Unit	Notes
VBACK	Backup battery charging from CHAPS	3.02	3.15	3.28	V	
	Backup battery charging from CHAPS	100	200	500	uA	Vout@VBAT-0.2V
VBACK	Backup battery supply to CCONT	2		3.28	V	
	Backup battery supply to CCONT		80		uA	

Power Distribution

In normal operation the baseband is powered from the phone's battery. The battery consists of one Lithium-Ion cell. An external charger can be used for recharging the battery and supplying power to the phone.

The baseband contains parts that control power distribution to whole phone excluding those parts that use continuous battery supply. The battery feeds power directly to the CCONT and UI (buzzer and display and keyboard lights).

The power management circuit CHAPS provides protection against over-voltages, charger failures and pirate chargers etc. that would otherwise cause damage to the phone.

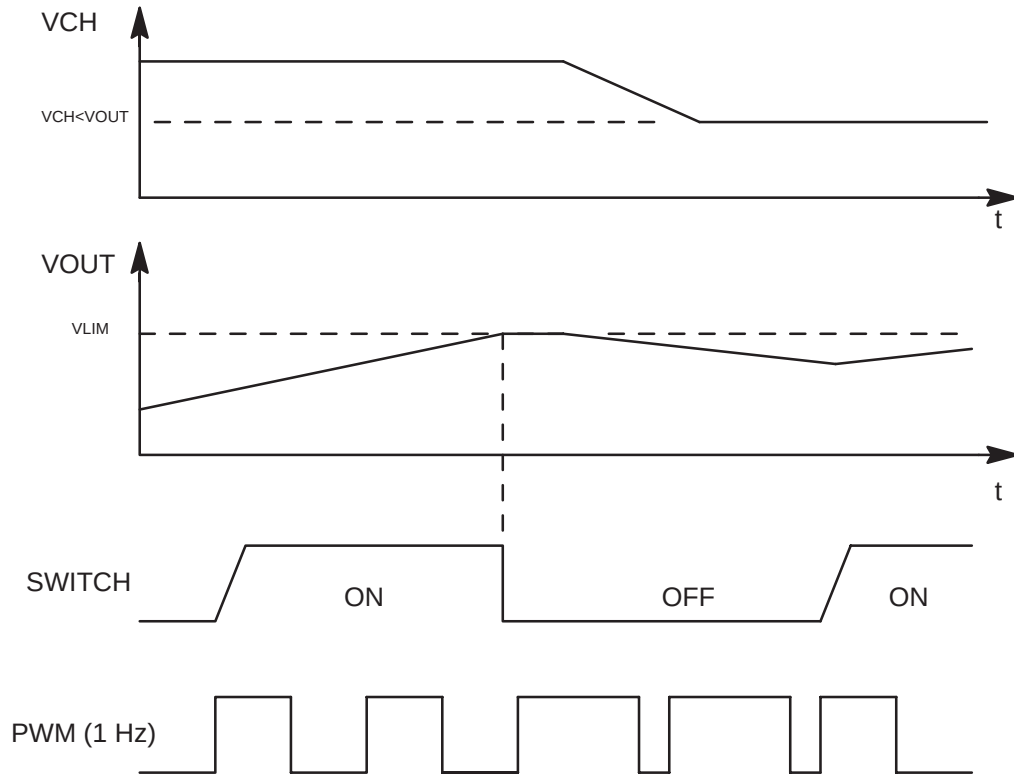


Battery charging

The electrical specifications give the idle voltages produced by the acceptable chargers at the DC connector input. The absolute maximum input voltage is 30V due to the transient suppressor that is protecting the charger input. At phone end there is no difference between a plug-in charger or a desktop charger. The DC-jack pins and bottom connector charging pads are connected together inside the phone.

The voltage limit (VLIM1 or VLIM2) is selected by logic LOW or logic HIGH on the CHAPS (N101) VLIM input pin. In NSM-3 phones VLIM is fixed low in HW.

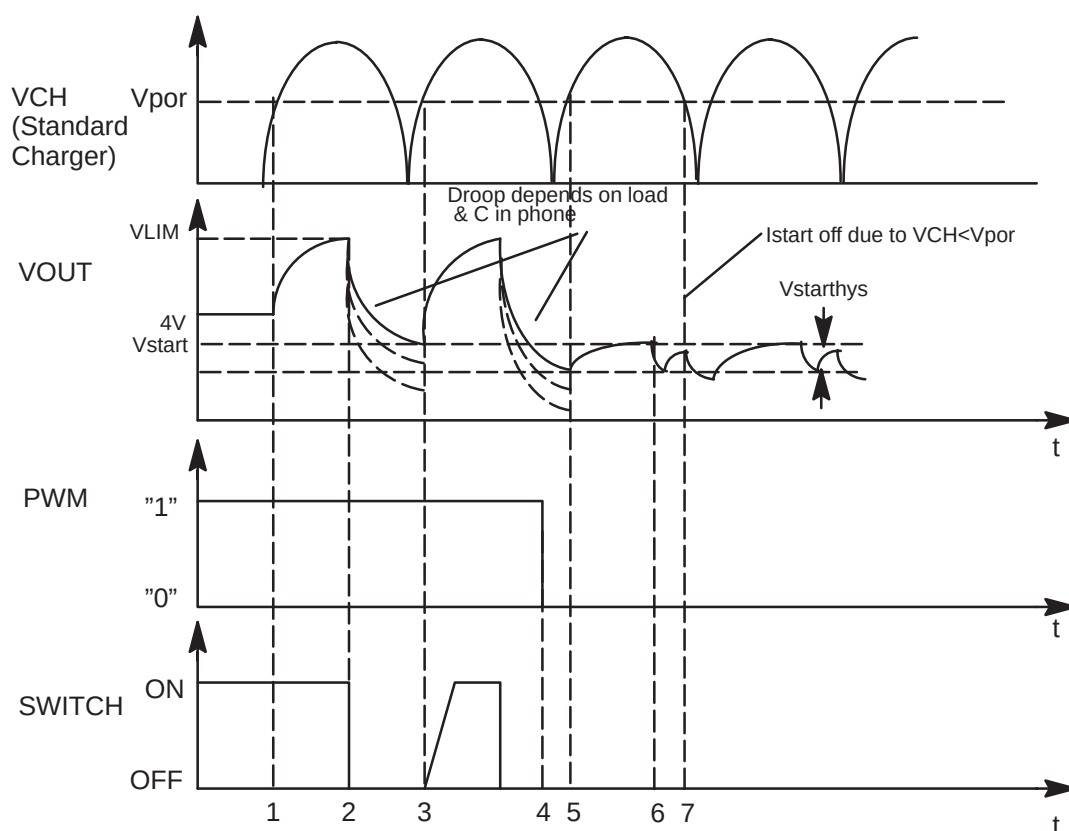
When the switch in output overvoltage situation has once turned OFF, it stays OFF until the the battery voltage falls below VLIM and PWM = LOW is detected. The switch can be turned on again by setting PWM = HIGH.



Battery Removal During Charging

Output overvoltage protection is also needed in case the main battery is removed when charger connected or charger is connected before the battery is connected to the phone.

With a charger connected, if VOUT exceeds VLIM, CHAPS turns switch OFF until the charger input has sunken below Vpor (nominal 3.0V, maximum 3.4V). MCU software will stop the charging (turn off PWM) when it detects that battery has been removed. The CHAPS remains in protection state as long as PWM stays HIGH after the output overvoltage situation has occurred.



1. Battery removed, (standard) charger connected, VOUT rises (follows charger voltage)
2. VOUT exceeds limit VLIM(X), switch is turned immediately OFF
3. VOUT falls (because no battery), also $VCH < V_{por}$ (standard chargers full-rectified output). When $VCH > V_{por}$ and $VOUT < VLIM(X)$ → switch turned on again (also PWM is still HIGH) and VOUT again exceeds VLIM(X).
4. Software sets PWM = LOW → CHAPS does not enter PWM mode
5. PWM low → Startup mode, startup current flows until Vstart limit reached
6. VOUT exceeds limit Vstart, Istart is turned off
7. VCH falls below Vpor

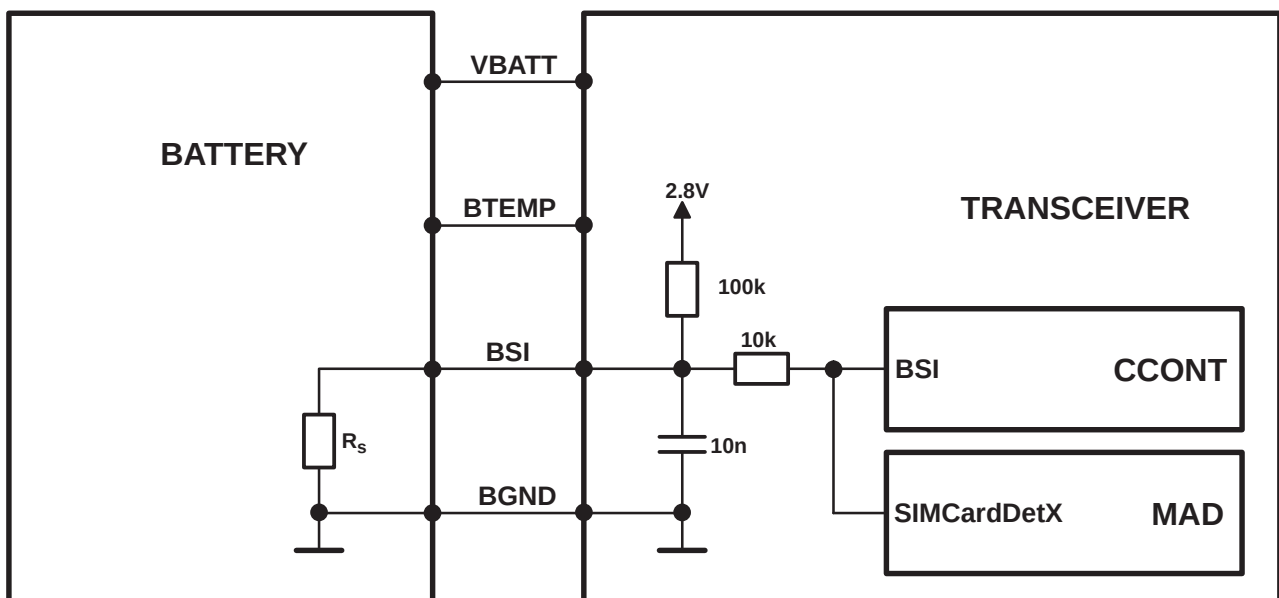
PWM

When a charger is used, the power switch is turned ON and OFF by the PWM input. PWM rate is 1Hz. When PWM is HIGH, the switch is ON and the output current $I_{out} = \text{charger current} - \text{CHAPS supply current}$. When PWM is LOW, the switch is OFF and the output current $I_{out} = 0$. To prevent the switching transients inducing noise in audio circuitry of the phone soft switching is used.

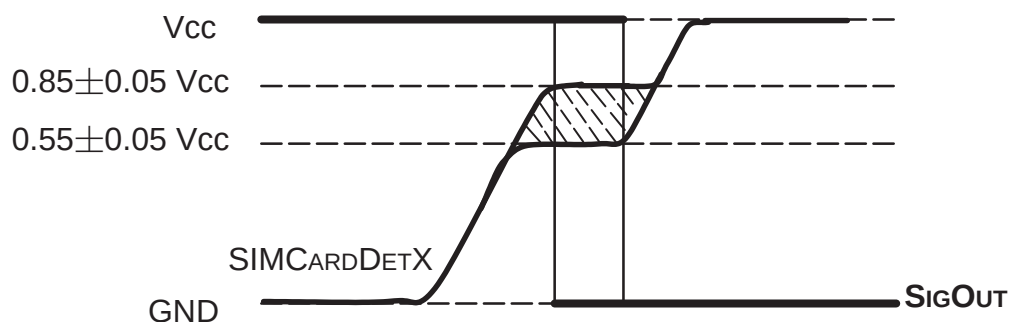
Battery Identification

Different battery types are identified by a pulldown resistor inside the battery pack. The BSI line inside transceiver has a 100k pullup to VBB. The MCU can identify the battery by reading the BSI line DC-voltage level with a CCONT (N100) A/D-converter.

Name	Min	Typ	Max	Unit	Notes
BSI	0		2.8	V	Battery size indication 100k pullup resistor to VBB in phone SIM Card removal detection (Treshold is 2.4V@VBB=2.8V)
	67	68	69	kohm	Indication of a BLB-2 battery (650 mAh Li-Ion)
	0		1	kohm	Indication resistor for a service battery



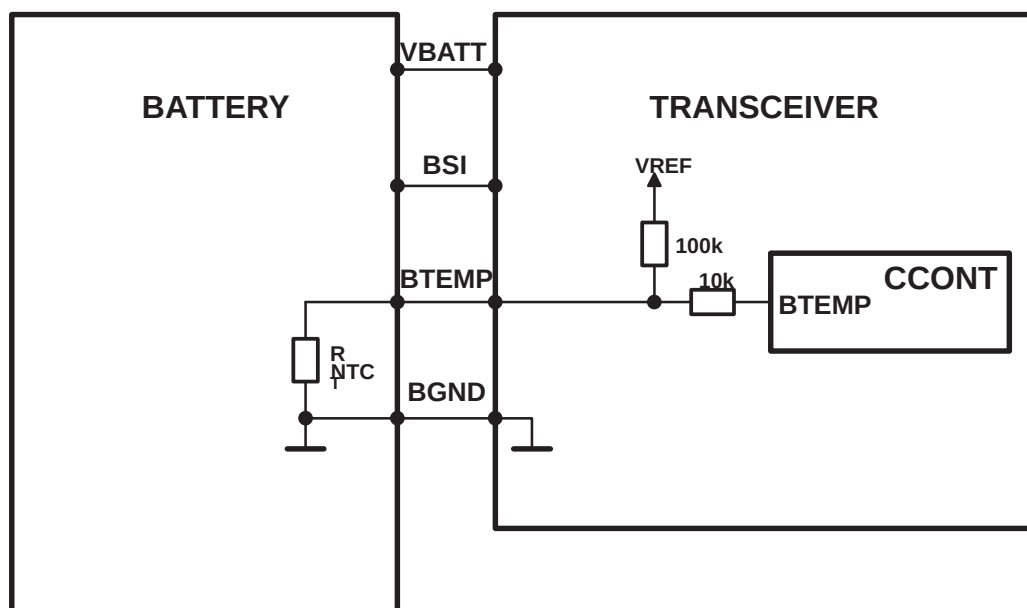
The battery identification line is used also for battery removal detection. The BSI line is connected to a SIMCardDetX line of MAD2. SIMCardDetX is a threshold detector with a nominal input switching level $0.85 \times V_{cc}$ for a rising edge and $0.55 \times V_{cc}$ for a falling edge. The battery removal detection is used as a trigger to power down the SIM card before the power is lost. The BSI contact in the battery contact disconnects before the other contacts so that there is a delay between battery removal detection and supply power off.



Battery Temperature

The battery temperature is measured with a NTC inside the battery pack. The BTEMP line inside transceiver has a 100k pullup to VREF. The MCU can calculate the battery temperature by reading the BTEMP line DC-voltage level with a CCONT (N100) A/D-converter.

Pin	Name	Min	Typ	Max	Unit	Notes
3	BTEMP	0		1.4	V	Battery temperature indication 100k pullup resistor to VREF in phone Battery package has NTC pull down resistor: 47k +/-5%@+25C , B=4050+/-3%
		2.1		3	V	Phone power up by battery (input)
		5	10	20	ms	Power up pulse width
		1.9		2.8	V	Battery power up by phone (output)
		90	100	200	ms	Power up pulse width
		-5		5	%	100k pullup resistor tolerance



Supply Voltage Regulators

The heart of the power distribution is the CCONT. It includes all the voltage regulators and feeds the power to the whole system. The baseband digital parts are powered from the VBB regulator which provides 2.8V baseband supply. The baseband regulator is active always when the phone is powered on. The VBB baseband regulator feeds MAD and memories, COBBA digital parts and the LCD driver in the UI section. There is a separate regulator for a SIM card. The regulator is selectable between 3V and 5V and controlled by the SIMPwr line from MAD to CCONT. The COBBA analog parts are powered from a dedicated 2.8V supply VCOBBA. The CCONT supplies also 5V for RF and for flash VPP. The CCONT contains a real time clock function, which is powered from a RTC backup when the main battery is disconnected. The RTC backup is rechargeable polyacene battery. The battery is charged from the main battery voltage by the CHAPS when the main battery voltage is over 3.2V.

Operating mode	Vref	RF REG	VCOBBA	VBB	VSIM	SIMIF
Power off	Off	Off	Off	Off	Off	Pull down
Power on	On	On/Off	On	On	On	On/Off
Reset	On	Off VR1 On	On	On	Off	Pull down
Sleep	On	Off	Off	On	On	On/Off

NOTE: COBBA regulator is off in SLEEP mode. Its output pin may be fed from V_{BB} in SLEEP mode by setting bit RFReg(5) to '1' (default).

CCONT includes also five additional 2.8V regulators providing power to the RF section. These regulators can be controlled either by the direct control signals from MAD or by the RF regulator control register in CCONT which MAD can update. Below are the listed the MAD control lines and the regulators they are controlling.

- TxPwr controls **VTX regulator (VR5)**
- RxPwr controls **VRX regulator (VR2)**
- SynthPwr controls all the rf regulators except VR1
- VCXOPwr controls VXO regulator (VR1)

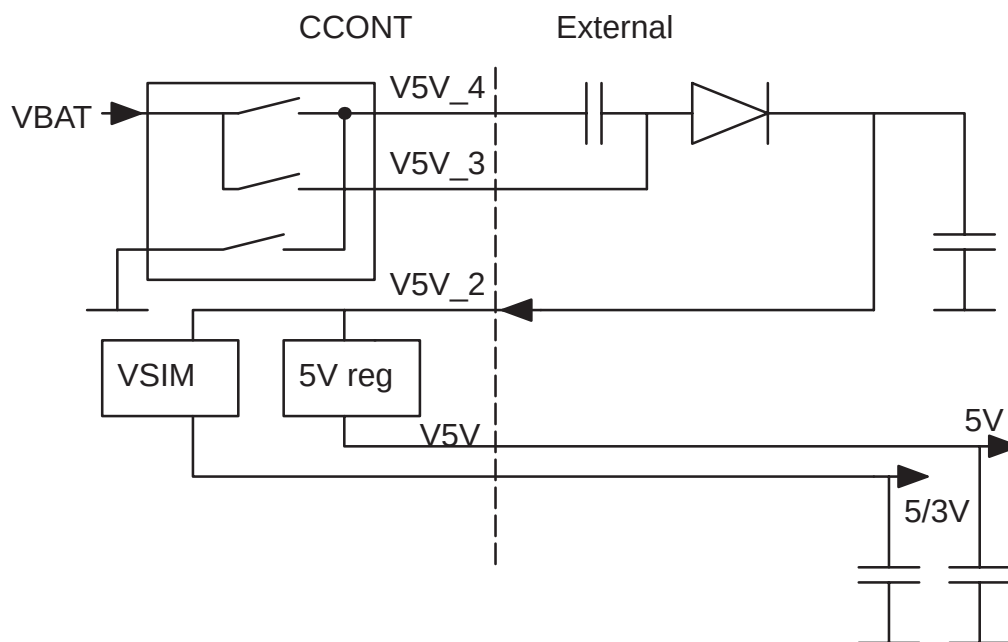
In addition to the above mentioned signals MAD includes also TXP control signal which goes to HAGAR power control block. The transmitter power control TXC is led from COBBA to HAGAR.

Switched Mode Supply VSIM

There is a switched mode supply for SIM-interface. SIM voltage is selected via serial IO. The 5V SMR can be switched on independently of the SIM voltage selection, but can't be switched off when VSIM voltage value is set to 5V.

NOTE: VSIM and V5V can give together a total of 30mA.

In the next figure the principle of the SMR / VSIM-functions is shown.



Power Up and Power Down

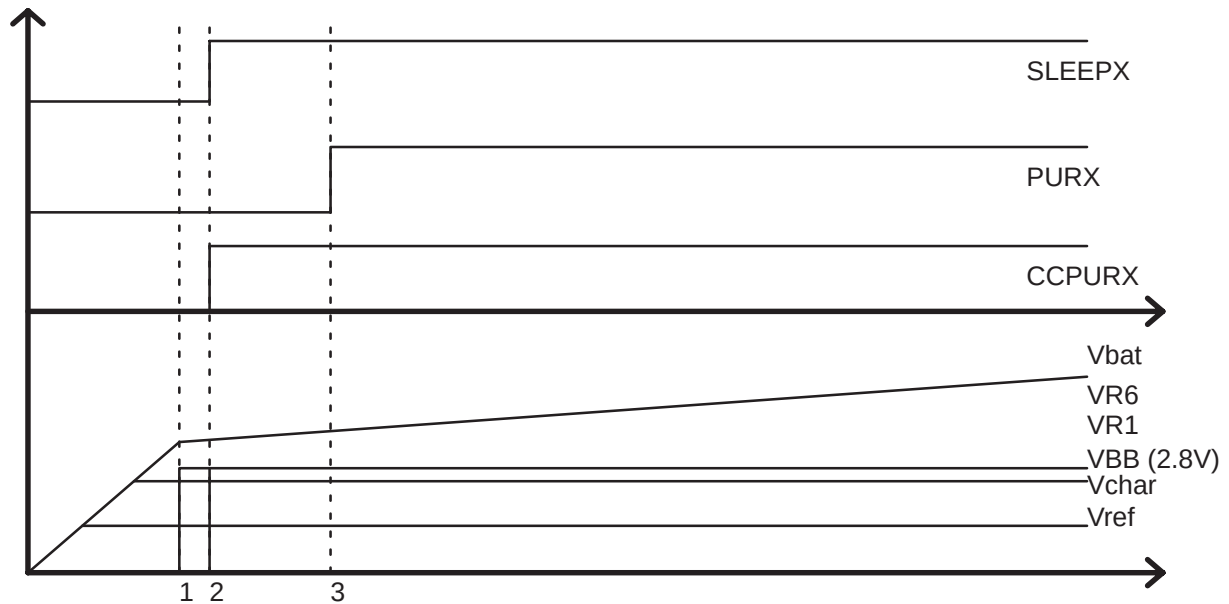
The baseband is powered up by:

1. Pressing the power key, that generates a PWRONX interrupt signal from the power key to the CCONT, which starts the power up procedure.
2. Connecting a charger to the phone. The CCONT recognizes the charger from the VCHAR voltage and starts the power up procedure.
3. A RTC interrupt. If the real time clock is set to alarm and the phone is switched off, the RTC generates an interrupt signal, when the alarm is gone off. The RTC interrupt signal is connected to the PWRONX line to give a power on signal to the CCONT just like the power key.
4. A battery interrupt. Intelligent battery packs have a possibility to power up the phone. When the battery gives a short (10ms) voltage pulse through the BTEMP pin, the CCONT wakes up and starts the power on procedure.

Power up with a charger

When the charger is connected CCONT will switch on the CCONT digital voltage as soon as the battery voltage exceeds 3.0V. The reset for

CCONT's digital parts is released when the operating voltage is stabilized (50 us from switching on the voltages). Operating voltage for VCXO is also switched on. The counter in CCONT digital section will keep MAD in reset for 62 ms (PURX) to make sure that the clock provided by VCXO is stable. After this delay MAD reset is released, and VCXO –control (SLEEPX) is given to MAD. The next diagram explains the power on procedure with charger (the picture assumes empty battery, but the situation would be the same with full battery):

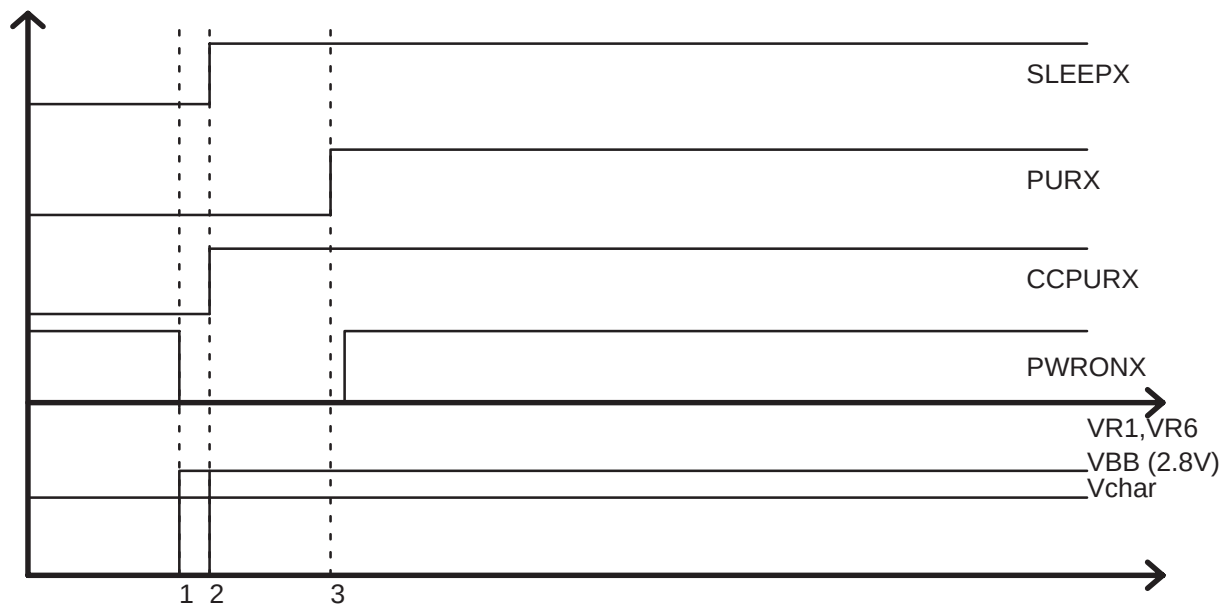


- 1: Battery voltage over 3.0==>Digital voltages to CCONT (VBB)
- 2: CCONT digital reset released. VCXO turned on
- 3: 62ms delay before PURX released

When the phone is powered up with an empty battery pack using the standard charger, the charger may not supply enough current for standard powerup procedure and the powerup must be delayed.

Power Up With The Power Switch (PWRONX)

When the power on switch is pressed the PWRONX signal will go low. CCONT will switch on the CCONT digital section and VCXO as was the case with the charger driven power up. If PWRONX is low when the 64 ms delay expires, PURX is released and SLEEPX control goes to MAD. If PWRONX is not low when 64 ms expires, PURX will not be released, and CCONT will go to power off (digital section will send power off signal to analog parts)



Power Up by RTC

RTC (internal in CCONT) can power the phone up by changing RTCPwr to logical 1.

Power Up by IBI

IBI can power CCONT up by giving a short pulse (10ms) through the BTEMP line. After powerup BTEMP will act as any other input channel for ADC.

When the PURX reset is released, the MAD releases the system reset ExtSysResetX and the internal MCURresetX signals and starts the boot program execution from MAD bootrom if MAD GenSDIO pin is pulled low or from external memory if GenSDIO pin is pulled high. In normal operation the program execution continues from the flash program memory. If the MBUS line is pulled low during the power up the bootrom starts a flash programming sequence and waits for the prommer response through FBUS_RX line.

Power Down

The baseband is powered down by:

1. Pressing the power key, that is monitored by the MAD, which starts the power down procedure.
2. If the battery voltage is dropped below the operation limit, either by not charging it or by removing the battery.
3. Letting the CCONT watchdog expire, which switches off all CCONT regulators and the phone is powered down.

4. Setting the real time clock to power off the phone by a timer. The RTC generates an interrupt signal, when the alarm is gone off. The RTC interrupt signal is connected to the PWRONX line to give a power off signal to the CCONT just like the power key.

The power down is controlled by the MAD. When the power key has been pressed long enough or the battery voltage is dropped below the limit the MCU initiates a power down procedure and disconnects the SIM power. Then the MCU outputs a system reset signal and resets the DSP. If there is no charger connected the MCU writes a short delay to CCONT watchdog and resets itself. After the set delay the CCONT watchdog expires, which activates the PURX and all regulators are switched off and the phone is powered down by the CCONT.

If a charger is connected when the power key is pressed the phone enters into the acting dead mode.

Modes of Operation

Acting Dead

If the phone is off when the charger is connected, the phone is powered on but enters a state called "acting dead". To the user the phone acts as if it was switched off. A battery charging alert is given and/or a battery charging indication on the display is shown to acknowledge the user that the battery is being charged.

Active Mode

In the active mode the phone is in normal operation, scanning for channels, listening to a base station, transmitting and processing information. All the CCONT regulators are operating. There are several substates in the active mode depending on if the phone is in burst reception, burst transmission, if DSP is working etc.

Sleep Mode

In the sleep mode all the regulators except the baseband VBB and the SIM card VSIM regulators are off. Sleep mode is activated by the MAD after MCU and DSP clocks have been switched off. The voltage regulators for the RF section are switched off and the VCXO power control, VCXOPwr is set low. In this state only the 32 kHz sleep clock oscillator in CCONT is running. The flash memory power down input is connected to the ExtSysResetX signal, and the flash is deep powered down during the sleep mode.

The sleep mode is exited either by the expiration of a sleep clock counter in the MAD or by some external interrupt, generated by a charger connection, key press, headset connection etc. The MAD starts the wake up sequence and sets the VCXOPwr and ExtSysResetX control high. After VCXO settling time other regulators and clocks are enabled for active mode.

If the battery pack is disconnect during the sleep mode, the CCONT pulls the SIM interface lines low as there is no time to wake up the MCU.

Charging

Charging can be performed in any operating mode. The battery type/size is indicated by a resistor inside the battery pack. The resistor value corresponds to a specific battery capacity. This capacity value is related to the battery technology as different capacity values are achieved by using different battery technology.

The battery voltage, temperature, size and current are measured by the CCONT controlled by the charging software running in the MAD.

The power management circuitry controls the charging current delivered from the charger to the battery. Charging is controlled with a PWM input signal, generated by the CCONT. The PWM pulse width is controlled by the MAD and sent to the CCONT through a serial data bus. The battery voltage rise is limited by turning the CHAPS switch off when the battery voltage has reached 4.2 V. Charging current is monitored by measuring the voltage drop across a 220 mohm resistor.

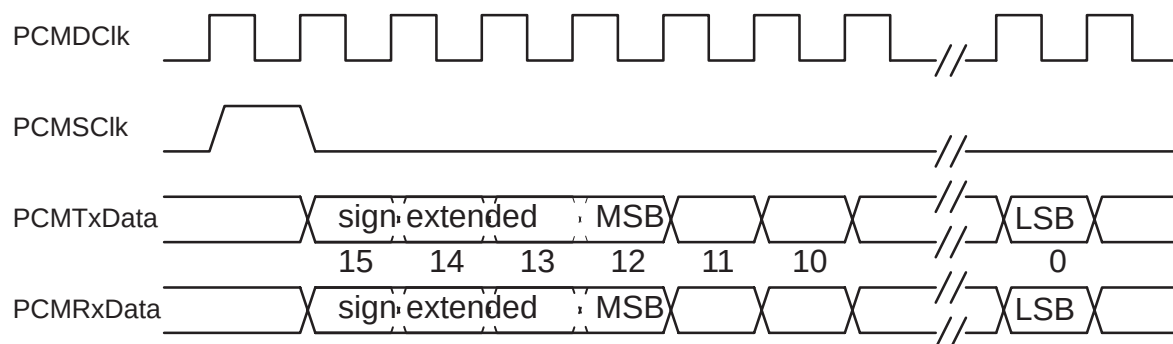
Watchdog

The Watchdog block inside CCONT contains a watchdog counter and some additional logic which are used for controlling the power on and power off procedures of CCONT. Watchdog output is disabled when WDDisX pin is tied low. The WD-counter runs during that time, though. Watchdog counter is reset internally to 32 s at power up. Normally it is reset by MAD writing a control word to the WDReg.

Audio control

PCM serial interface

The interface consists of following signals: a PCM codec master clock (PCMDClk), a frame synchronization signal to DSP (PCMSClk), a codec transmit data line (PCMTX) and a codec receive data line (PCMRX). The COBBA–GJP generates the PCMDClk clock, which is supplied to DSP SIO. The COBBA–GJP also generates the PCMSClk signal to DSP by dividing the PCMDClk. The PCMDClk frequency is 1.000 MHz and is generated by dividing the RFIClk 13 MHz by 13. The COBBA–GJP further divides the PCMDClk by 125 to get a PCMSClk signal, 8.0 kHz.



Digital Control

The baseband functions are controlled by the MAD asic, which consists of a MCU, a system ASIC and a DSP.

MAD2 WD1

MAD2 WD1 contains following building blocks:

- ARM RISC processor with both 16–bit instruction set (THUMB mode) and 32–bit instruction set (ARM mode)
- TI Lead DSP core with peripherals:
 - API (Arm Port Interface memory) for MCU–DSP communication, DSP code download, MCU interrupt handling vectors (in DSP RAM) and DSP booting.
 - Serial port (connection to PCM)
 - Timer
 - DSP memory
- BUSC (BusController for controlling accesses from ARM to API, System Logic and MCU external memories, both 8– and 16–bit memories)
- System Logic
 - CTSI (Clock, Timing, Sleep and Interrupt control)
 - MCUIF (Interface to ARM via BusC). Contains MCU BootROM
 - DSPIF (Interface to DSP)
 - MFI (Interface to COBBA AD/DA Converters)
 - CODER (Block encoding/decoding and A51&A52 ciphering)
 - AccIF(Accessory Interface)
 - SCU (Synthesizer Control Unit for controlling 2 separate synthesizer)
 - UIF (Keyboard interface, serial control interface for COBBA PCM Codec, LCD Driver and CCONT)
 - SIMI (SimCard interface with enhanced features)
 - PUP (Parallel IO, USART and PWM control unit for vibra and buzzer)
 - Flexpool

The MAD2 operates from a 13 MHz system clock, which is generated from the 13Mhz VCXO frequency. The MAD2 supplies a 6,5 MHz or a 13 MHz internal clock for the MCU and system logic blocks and a 13 MHz clock for the DSP, where it is multiplied to 45.5 MHz DSP clock. The system clock can be stopped for a system sleep mode by disabling the VCXO supply power from the CCONT regulator output. The CCONT provides a 32 kHz sleep clock for internal use and to the MAD2, which is

used for the sleep mode timing. The sleep clock is active when there is a battery voltage available i.e. always when the battery is connected.

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
A1	MCUGemIO 0	O		2	0		MCU General purpose output port
C2	LEADGND						Lead Ground
D2	Col4	I/O	UIF	2	Input	program-mable pullup PR0201	I/O line for key-board column 4
D3	Col3	I/O	UIF	2	Input	program-mable pullup PR0201	I/O line for key-board column 3
H11	MCUGenIO1	I/O		2	Input, pullup	pullup PR0201	General purpose I/O port
E4	GND						Ground
D4	Col2	I/O	UIF	2	Input	program-mable pullup PR0201	I/O line for key-board column 2
C4	Col1	I/O	UIF	2	Input	program-mable pullup PR0201	I/O line for key-board column 1
C3	Col0	I/O	UIF	2	Input	program-mable pullup PR0201	I/O line for key-board column 0
D1	LCDCSX	I/O	UIF	2	Input	external pullup/down	serial LCD driver chip select, parallel LCD driver enable
E1	LEADVCC						Lead Power
F12	LoByteSelX						NC
E3	Row5LCD CD	I/O	UIF	2	Input, pullup	pullup PR0201	Keyboard row5 data I/O , serial LCD driver command/data indicator, parallel LCD driver read/write select
N4	VCC_CORE					Core VCC in 3325c10	Power
E2	Row4	I/O	UIF	2	Input, pullup	pullup PR0201	I/O line for key-board row 4, parallel LCD driver register selection control
F4	Row3	I/O	UIF	2	Input, pullup	pullup PR0201	I/O line for key-board row 3, parallel LCD driver data

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
F3	Row2	I/O	UIF	2	Input, pullup	pullup PR0201	I/O line for keyboard row 2, parallel LCD driver data
F2	Row1	I/O	UIF	2	Input, pullup	pullup PR0201	I/O line for keyboard row 1, parallel LCD driver data
F1	Row0	I/O	UIF	2	Input, pullup	pullup PR0201	I/O line for keyboard row 0, parallel LCD driver data
L11	JTDO	O		2	Tri-state		JTAG data out
L5	GND						Ground
N12	JTRst	I			Input, pull-down	pulldown PD0201	JTAG reset
M12	JTCIk	I			Input	pulldown PD0201	JTAG Clock
N13	JTDI	I			Input, pullup	pullup PR0201	JTAG data in
M13	JTMS	I			Input, pullup	pullup PR0201	JTAG mode select
G13	VCC_IO					IO VCC in 3325c10	Power
L12	CoEmu0	I/O		2	Input, pullup	pullup PR0201	DSP/MCU emulation port 0
L13	CoEmu1	I/O		2	Input, pullup	pullup PR0201	DSP/MCU emulation port 1
H4	LEADGND						Lead Ground
L1	ARMGND						ARM Ground
N3	MCUAd0	O	MCU MEMORY	2	0		MCU address bus
K4	ARMVCC						ARM Power
N2	MCUAd1	O	MCU MEMORY	2	0		MCU address bus
N1	MCUAd2	O	MCU MEMORY	2	0		MCU address bus
M4	MCUAd3	O	MCU MEMORY	2	0		MCU address bus
M3	MCUAd4	O	MCU MEMORY	2	0		MCU address bus
M2	MCUAd5	O	MCU MEMORY	2	0		MCU address bus
M1	MCUAd6	O	MCU MEMORY	2	0		MCU address bus

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
H1	VCC_IO					IO VCC in 3325c10	Power
L4	MCUAd7	O	MCU MEMORY	2	0		MCU address bus
L3	MCUAd8	O	MCU MEMORY	2	0		MCU address bus
L2	MCUAd9	O	MCU MEMORY	2	0		MCU address bus
K5	MCUAd10	O	MCU MEMORY	2	0		MCU address bus
J4	GND						Ground
K3	MCUAd11	O	MCU MEMORY	2	0		MCU address bus
K2	MCUAd12	O	MCU MEMORY	2	0		MCU address bus
K1	MCUAd13	O	MCU MEMORY	2	0		MCU address bus
J3	MCUAd14	O	MCU MEMORY	2	0		MCU address bus
J2	MCUAd15	O	MCU MEMORY	2	0		MCU address bus
J1	MCUAd16	O	MCU MEMORY	2	0		MCU address bus
M10	VCC_CORE					Core VCC in 3325c10	Power
H3	MCUAd17	O	MCU MEMORY	2	0		MCU address bus
H2	MCUAd18	O	MCU MEMORY	2	0		MCU address bus
G4	MCUAd19	O	MCU MEMORY	2	0		MCU address bus
G3	MCUAd20	O	MCU MEMORY	2	0		MCU address bus
G2	VCONT	O					
K6	ExtMCUDa0	I/O	MCU MEMORY	2	Input		MCU data bus
K9	GND						Ground
L6	ExtMCUDa1	I/O	MCU MEMORY	2	Output		MCU data bus
M6	ExtMCUDa2	I/O	MCU MEMORY	2	Output		MCU data bus
N6	ExtMCUDa3	I/O	MCU MEMORY	2	Output		MCU data bus
L7	ExtMCUDa4	I/O	MCU MEMORY	2	Output		MCU data bus

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
M7	ExtMCUDa5	I/O	MCU MEMORY	2	Output		MCU data bus
N7	ExtMCUDa6	I/O	MCU MEMORY	2	Output		MCU data bus
N8	ExtMCUDa7	I/O	MCU MEMORY	2	Output		MCU data bus
M8	MCUGenIODa0	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
L8	MCUGenIODa1	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
K8	MCUGenIODa2	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
N9	MCUGenIODa3	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
E10	GND						Ground
M9	MCUGenIODa4	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
L9	MCUGenIODa5	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
N10	MCUGenIODa6	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
L10	MCUGenIODa7	I/O		2	Input	MCU Data in 16-bit mode	General purpose I/O port
M5	MCURdX	O	MCU MEMORY	2	1		MCU Read strobe
G11	VCC_CORE					Core VCC in 3325c10	Power
N5	MCUWrX	O	MCU MEMORY	2	1		MCU write strobe
N11	ROM1SelX	O	MCU ROM	2	1		ROM chip select
M11	RAMSelX	O	MCU RAM	2	1		RAM chip select
J11	IRON	O	IR Mod	2	1		IR control
A1	MCUGenIO1	I/O		2	Input, pullup	pullup PR0201	General purpose I/O port
D8	DSPXF	O		2	1		External flag
K10	SCVCC						Special cell Power
K11	RFCIk	I	VCXO		Input		System clock from VCTCXO
K12	RFCIkGnd				Input		System clock reference ground input
K13	SIMCardDetX	I			Input		SIM card detection

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
J10	SCGND						Special cell Ground
D9	BuzzPWM	O	BUZZER	2	0		Buzzer PWM control
D11	LEADVCC						LEAD Power
G12	VibraPWM	O	VIBRA	2	0		Vibra PWM control
C9	GND						Ground
E12	MCUGenIO3	I/O		2	Input, pullup	pullup PR1001	General purpose I/O port
E13	MCUGenIO2	I/O		2	Input, pullup	pullup PR1001	General purpose I/O port
J13	KBLights	O	UIF	2	1		
C5	AccTxData	I/O		4	Tri-State	external pullup	Accessory TX data, Flash_TX
B6	VCC_IO					IO VCC in 3325c10	Power
F11	HookDet	I			Input		Non-MBUS accessory connection detector
F10	HeadDet	I			Input		Headset detection interrupt
D6	AccRxData	I			Input		Accessory RX data, Flash_RX
D5	GND						Ground
G10	MCUGenIO4	I/O		2	Input, pull-down	pulldown PD1001	General purpose I/O port
B5	MBUS	I/O		2	Input, external pullup	external pullup	MBUS, Flash clock
E11	VCXOPwr	O	CCONT	2	1		VCXO regulator control
D13	SynthPwr	O	CCONT	2	0		Synthesizer regulator control
B7	VCC_CORE					Core VCC in 3325c10	Power
C10	GenCCONTCSX	O	CCONT	2	1		Chip select to CCONT
F13	LEADGND						LEAD Ground
B10	GenSDIO	I/O	CCONT, UIF	2	Input, external pullup/down	external pullup/down depending on how to boot	Serial data in/out

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
A10	GenSClk	O	CCONT, UIF	2	0		Serial clock
C11	SIMCardData	I/O	CCONT	2	0		SIM data
J12	GND						Ground
B13	PURX	I	CCONT		Input		Power Up Reset
B12	CCONTInt	I	CCONT		Input		CCONT interrupt
A13	Clk32k	I	CCONT		Input		Sleep clock oscillator input
D10	VCC_IO					IO VCC in 3325c10	Power
A12	SIMCardClk	O	CCONT	2	0		SIM clock
B11	SIMCardRstX	O	CCONT	2	0		SIM reset
A11	SIMCardIOC	O	CCONT	2	0		SIM data in/out control
D12	SIMCardPwr	O	CCONT	2	0		SIM power control
H10	<i>LEADVCC</i>						LEAD Power
C13	RxPwr	O		2	0		(RX regulator control)
C12	TxPwr	O		2	0		(TX regulator control)
H12	TestMode	I			Input, pull-down	pulldown PD0201	Test mode select
H13	ExtSysResetX	O		2	0		System Reset
B9	PCMTxData	O	COBBA	2	0		Transmit data, DX
K7	VCC_IO					IO VCC in 3325c10	Power
A9	PCMRxData	I	COBBA		Input		Receive data, RX
B8	PCMDClk	I	COBBA		Input		Transmit clock, CLKX
A8	PCMSClk	I	COBBA		Input		Transmitframe sync, FSX
C6	COBBAClk	O	COBBA	4	1		COBBA clock, 13 MHz
A6	COBBACSX		COBBA				COBBA
A7	COBBASD		COBBA				COBBA
C7	IData		COBBA				COBBA
D7	QData		COBBA				COBBA
G1	VCC_CORE					Core VCC in 3325c10	Power

Ball	Name	Pin Type	Connected to/from	Drive req. mA	Reset State	Note	Explanation
C1	DSPGenOut3	O	RF	2	0		DSP general purpose output
B4	DSPGenOut2	O	RF	2	0		DSP general purpose output
A4	DSPGenOut1	O	RF	2	0		DSP general purpose output
A5	DSPGenOut0	O	CRFU	2	0		DSP general purpose output
A3	FrACtrl	O	RF	2	0		RF front amplifier control
B3	SynthEna	O	HAGAR	2	0		Synthesizer data enable
B1	SynthClk	O	HAGAR	2	0		Synthesizer clock
B2	SynthData	O	HAGAR	2	0		Synthesizer data
A2	TxPA	O	HAGAR	2	0		Power amplifier control

Memories

MAD memory configuration

The MAD2WD1 used in NSM–3 phones contains 16 kW RAM, and 80 kW ROM memory.

Memory

The MCU program code resides in an external flash program memory, which size is 16Mbits (1024k x 16bit). The MCU work (data) memory size is 2048 kbits (256k x 16bit). Flash and SRAM memory chips are packed in same combo memory package.

The BusController (BUSE) section in the MAD decodes the chip select signals for the external memory devices and the system logic. BUSE controls internal and external bus drivers and multiplexers connected to the MCU data bus. The MCU address space is divided into access areas with separate chip select signals. BUSE supports a programmable number of wait states for each memory range.

Program and Data Memory

The MCU program code resides in the program memory. The program memory is 16Mbits (1024k x 16bit) Flash memory.

The flash memory has a power down pin that should be kept low, during the power up phase of the flash to ensure that the device is powered up in the correct state, read only. The power down pin is utilized in the system sleep mode by connecting the ExtSysResetX to the flash power down pin to minimize the flash power consumption during the sleep.

Nonvolatile data memory is implemented with program (Flash) memory. Special EEPROM emulation (EEEMmu) software is utilized.

Work Memory

The work memory is a static RAM of size 2096k (256k x 16). The memory contents are lost when the baseband voltage is switched off. All retainable data must be stored into the data memory when the phone is powered down.

MCU Memory Requirements

Device	Organization	Access Time ns	Wait States Used	Remarks
FLASH	1024kx16	120	1	uBGA 48
SRAM	256kx16	120	1	uBGA 48

MCU Memory Map

MAD2 supports maximum of 4GB internal and 4MB external address space. External memories use address lines MCUAd0 to MCUAd21 and

8-bit/16-bit databus. The BUSC bus controller supports 8- and 16-bit access for byte, double byte, word and double word data. Access wait states (0, 1 or 2) and used databus width can be selected separately for each memory block.

Flash Programming

The phone have to be connected to the flash loading adapter so that supply voltage for the phone and data transmission lines can be supplied from/to the adapter. When adapter switches supply voltage to the phone, the program execution starts from the BOOT ROM and the MCU investigates in the early start-up sequence if the flash prommer is connected. This is done by checking the status of the MBUS-line. Normally this line is high but when the flash prommer is connected the line is forced low by the prommer.

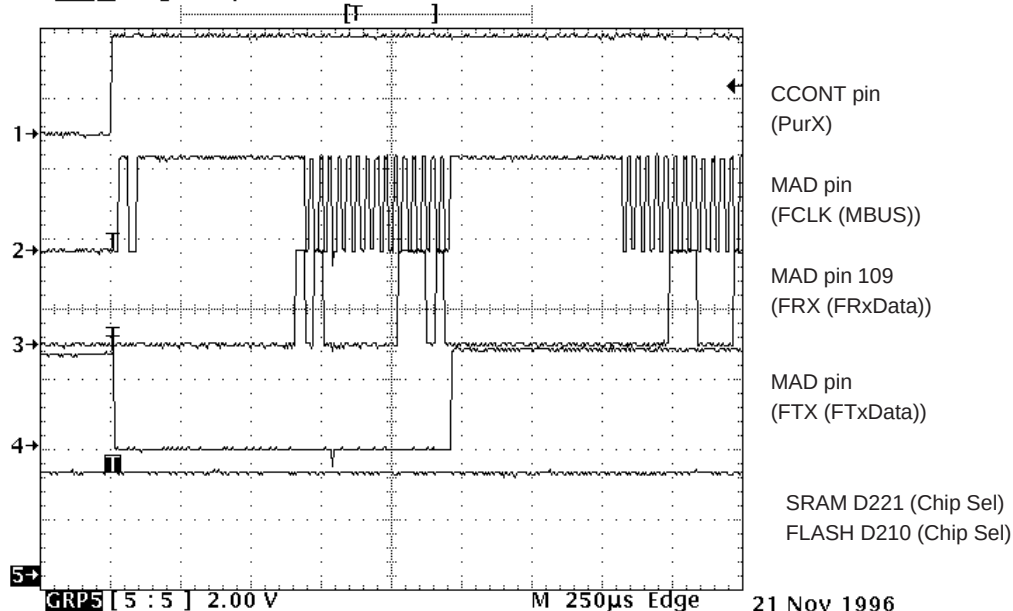
The flash prommer serial data receive line is in receive mode waiting for an acknowledgement from the phone. The data transmit line from the baseband to the prommer is initially high. When the baseband has recognized the flash prommer, the TX-line is pulled low. This acknowledgement is used to start to toggle MBUS (FCLK) line three times in order that MAD2 gets initialized. This must be happened within 15 ms after TX line is pulled low. After that the data transfer of the first two bytes from the flash prommer to the baseband on the RX-line must be done within 1 ms.

When MAD2 has received the secondary boot byte count information, it forces TX line high. Now, the secondary boot code must be sent to the phone within 10 ms per 16 bit word. If these timeout values are exceeded, the MCU (MAD2) starts normal code execution from flash. After this, the timing between the phone and the flash prommer is handled with dummy bites.

A 5V programming voltage is supplied inside the transceiver from the battery voltage with a switch mode regulator (5V/30mA) of the CCONT. The 5V is connected to VPP pin of the flash.

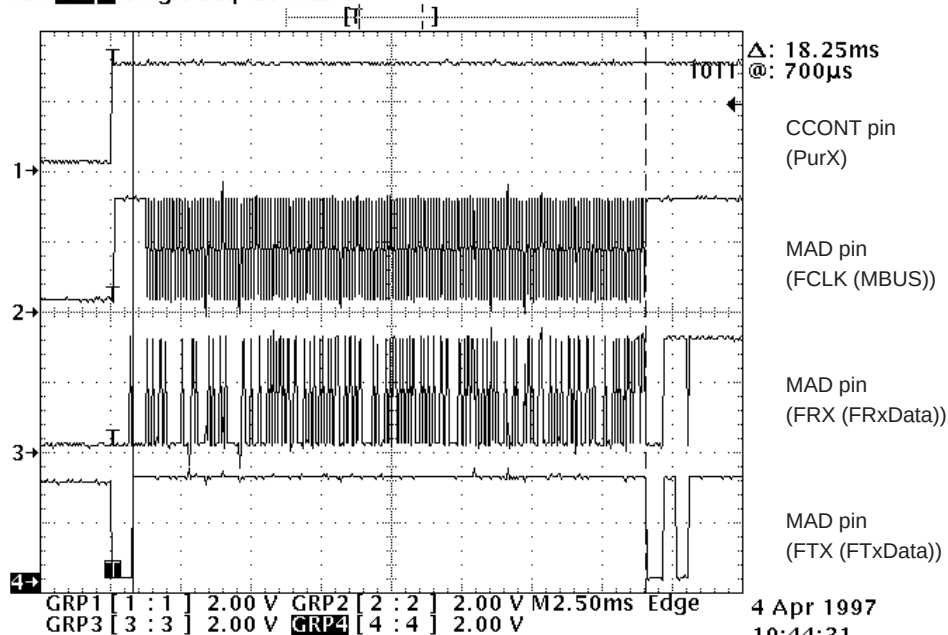
Flash Programming Sequence

Tek **Stop**: Single Seq 200kS/s



21 Nov 1996
11:27:03

Tek **Stop**: Single Seq 20.0kS/s



4 Apr 1997
10:44:31

COBBA GJP

COBBA GJP ASIC provides an interface between the baseband and the RF–circuitry. COBBA performs analogue to digital conversion of the receive signal. For transmit path COBBA performs digital to analogue conversion of the transmit amplifier power control ramp and the in–phase and quadrature signals. A slow speed digital to analogue converter will provide automatic frequency control (AFC).

COBBA is at any time connected to MAD asic with two interfaces, one for transferring TX and RX data between MAD and COBBA and one for transferring codec RX/TX samples.

Real Time Clock

Requirements for a real time clock implementation are a basic clock (hours and minutes), a calender and a timer with alarm and power on/off –function and miscellaneous calls. The RTC will contain only the time base and the alarm timer but all other functions (e.g. calendar) will be implemented with the MCU software. The RTC needs a power backup to keep the clock running when the phone battery is disconnected. The backup power is supplied from a rechargeable polyacene battery that can keep the clock running some ten minutes. If the backup has expired, the RTC clock restarts after the main battery is connected. The CCONT keeps MCU in reset until the 32kHz source is settled (1s max).

The CCONT is an ideal place for an integrated real time clock as the asic already contains the power up/down functions and a sleep control with the 32kHz sleep clock, which is running always when the phone battery is connected. This sleep clock is used for a time source to a RTC block.

RTC backup battery charging

CHAPS has a current limited voltage regulator for charging a backup battery. The regulator derives its power from VOUT so that charging can take place without the need to connect a charger. The backup battery is only used to provide power to a real time clock when VOUT is not present so it is important that power to the charging circuitry is derived from VOUT and that the charging circuitry does not present a load to the backup battery when VOUT is not present.

It should not be possible for charging current to flow from the backup battery into VOUT if VOUT happens to be lower than VBACK. Charging current will gradually diminish as the backup battery voltage reaches that of the regulation voltage.

RF Module

This RF module takes care of all RF functions of EGSM/DCS1800 dual-band engine. RF circuitry is located on one side of the 8 layer transceiver-PCB. PCB area for the RF circuitry is about 15 cm². The RF design is based on the first dualband direct conversion RF-IC "Hagar". So there is no intermediate frequency and that means the number of component is much lower than before and there shall be much less interference problems than previously.

EMC emissions are taken care of using metallized plastic shield, which screens the whole transceiver. Internal screening is realized with isolated partitions. At least the VCO is isolated. The baseband circuitry is located on the same side of the same board.

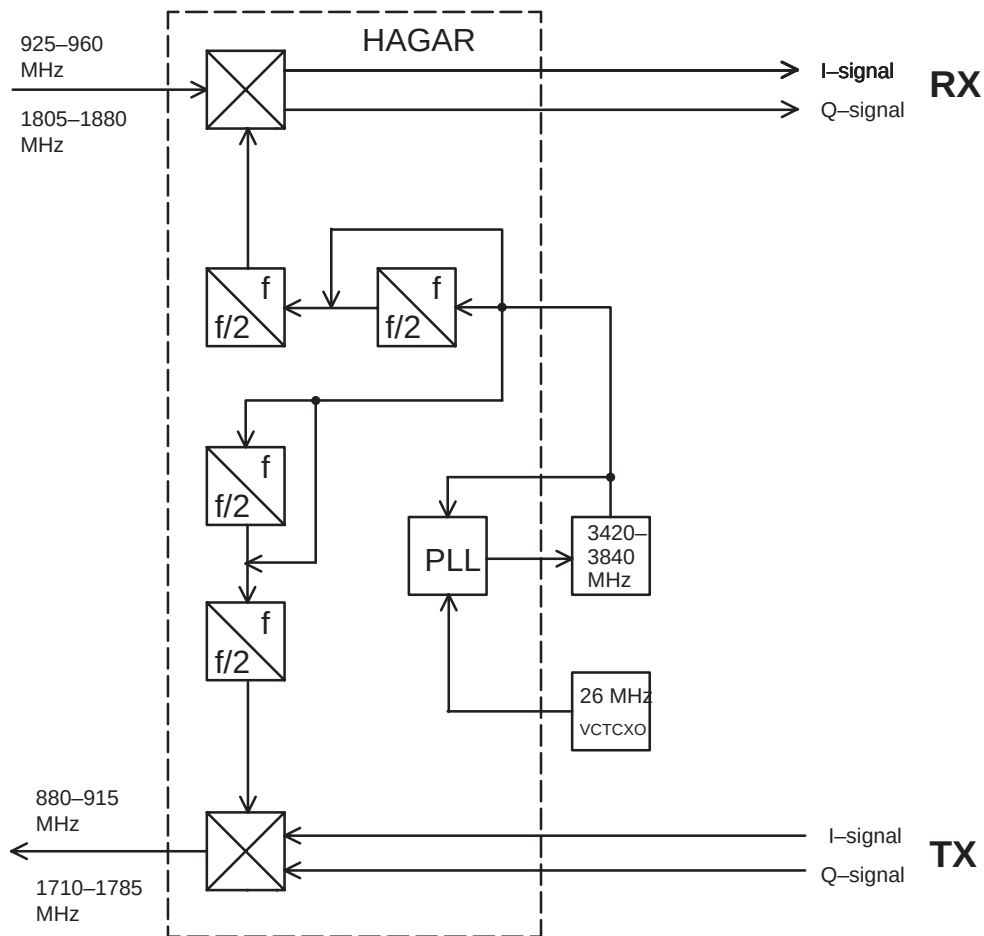
Maximum Ratings

Parameter	Rating
Battery voltage, idle mode	3.9 V
Regulated supply voltage	2.8 +/- 3% V
Voltage reference	1.5 +/- 1.5% V
Operating temperature range	-10...+55 deg. C
Absolute maximum voltage	4.8 V

RF Characteristics

Item	Values (EGSM / DCS1800)
Receive frequency range	925 ... 960 MHz / 1805 ... 1880 MHz
Transmit frequency range	880 ... 915 MHz / 1710 ... 1785 MHz
Duplex spacing	45 MHz / 95 MHz
Channel spacing	200 kHz
Number of RF channels	174 / 374
Power class	4 (EGSM900) / 1 (DCS1800)
Number of power levels	15 / 16

RF Frequency Plan



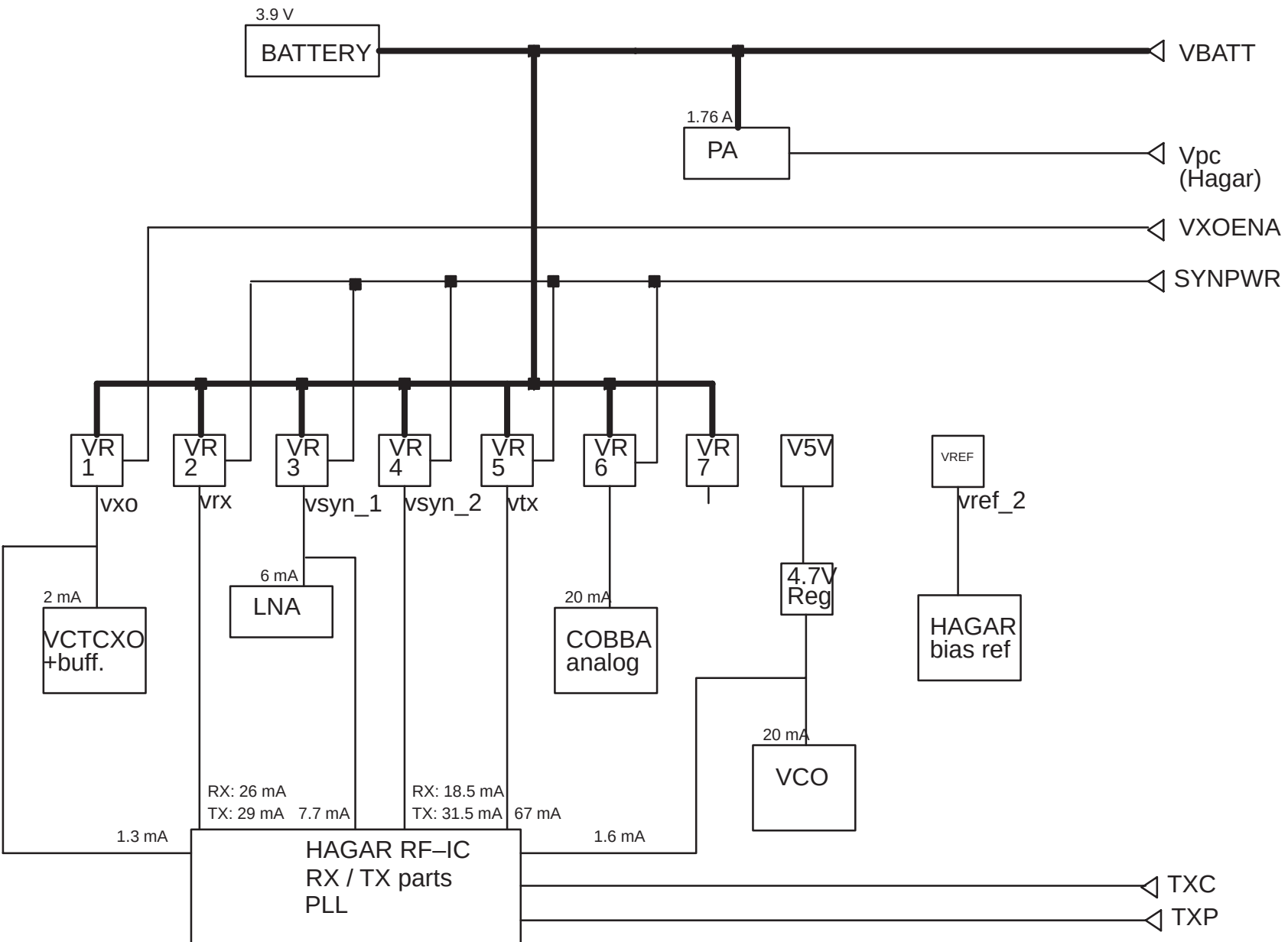
DC characteristics

Regulators

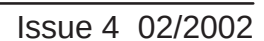
Transceiver has a multi function power management IC at baseband section, which contains among other functions, also 7 pcs of 2.8 V regulators. All regulators can be controlled individually with 2.8 V logic directly or through control register. In GSM direct controls are used to get fast switching, because regulators are used to enable RF-functions.

VREF_2 from CCONT IC and RXREF from COBBA IC are used as the reference voltages for HAGAR RF-IC, VREF_2 (1.5V) for bias reference and RXREF (1.2V) for RX ADC's reference.

Power Distribution Diagram



Architecture contains one RF-IC, dualband PA module, VCO-module, VCTCXO module and discrete LNA stages for both receive bands.



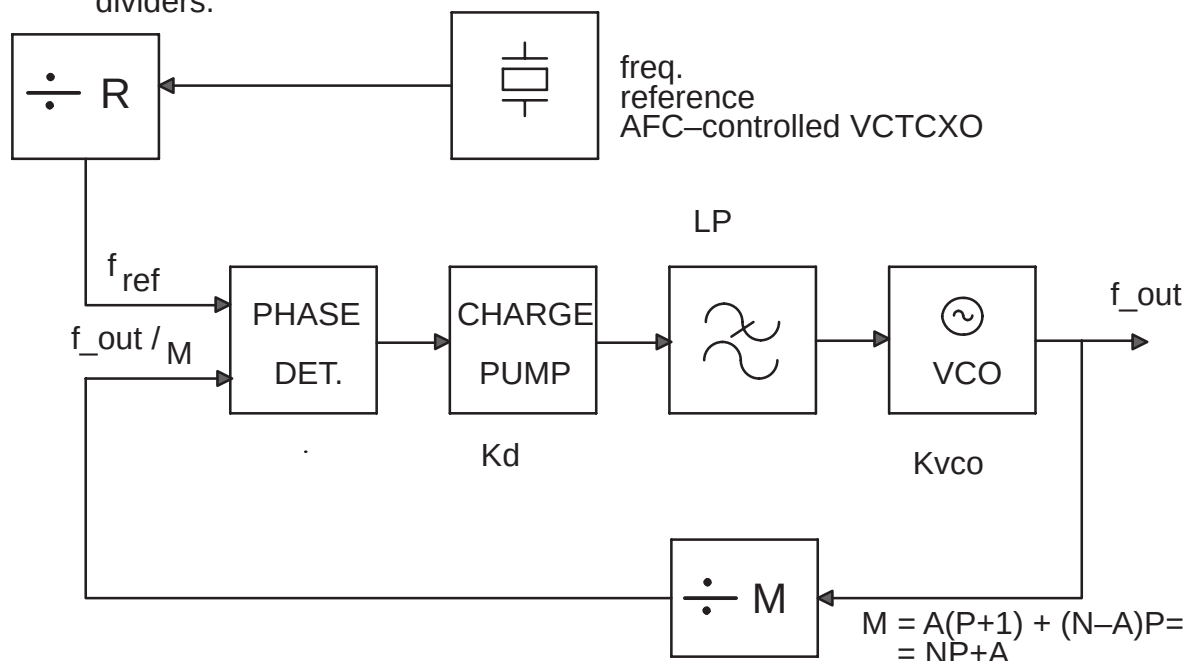
Frequency synthesizer

VCO frequency is locked with PLL into stable frequency source, which is a VCTCXO–module (voltage controlled temperature compensated crystal oscillator). VCTCXO is running at 26 MHz. Temperature effect is controlled with AFC (automatic frequency control) voltage. VCTCXO is locked into frequency of the base station. AFC is generated by baseband with a 11 bit conventional DAC in COBBA.

PLL is located in HAGAR RF–IC and is controlled via serial bus from COBBA–IC (baseband).

There are 64/65 (P/P+1) prescaler, N– and A–divider, reference divider, phase detector and charge pump for the external loop filter. SHF local signal, generated by a VCO–module (VCO = voltage controlled oscillator), is fed to prescaler. Prescaler is a dual modulus divider. Output of the prescaler is fed to N– and A–divider, which produce the input to phase detector. Phase detector compares this signal to reference signal (200kHz), which is divided with reference divider from VCTCXO output. Output of the phase detector is connected into charge pump, which charges or discharges integrator capacitor in the loop filter depending on the phase of the measured frequency compared to reference frequency.

Loop filter filters out the pulses and generates DC control voltage to VCO. Loop filter defines step response of the PLL (settling time) and effects to stability of the loop, that's why integrator capacitor has got a resistor for phase compensation. Other filter components are for sideband rejection. Dividers are controlled via serial bus. SDATA is for data, SCLK is serial clock for the bus and SENA1 is a latch enable, which stores new data into dividers.



LO–signal is generated by SHF VCO module. VCO has double frequency in DCS1800 and x 4 frequency in EGSM compared to actual RF channel frequency. LO signal is divided by two or four in HAGAR (depending on system mode).

Receiver

Receiver is a direct conversion, dualband linear receiver. Received RF–signal from the antenna is fed via RF–antenna switch to 1st RX dualband SAW filter and discrete LNAs (low noise amplifier), separate LNA branches for EGSM900 and DCS1800. Gain selection control of LNAs comes from HAGAR IC. Gain step is activated when RF–level in antenna is about –43 dBm.

After the LNA amplified signal (with low noise level) is fed to bandpass filter (2nd RX dualband SAW filter). RX bandpass filters defines how good are the blocking characteristics against spurious signals outside receive band and the protection against spurious responses.

These bandpass filtered signals are then balanced with baluns. Differential RX signal is amplified and mixed directly down to BB frequency in HAGAR. Local signal is generated with external VCO. VCO signal is divided by 2 (DCS1800) or by 4 (EGSM900). PLL and dividers are in HAGAR–IC.

From the mixer output to ADC input RX signal is divided into I– and Qsignals. Accurate phasing is generated in LO dividers. After the mixer DTOS amplifiers convert the differential signals to single ended. DTOS has two gain stages. The first one has constant gain of 12dB and 85kHz cut off frequency. The gain of second stage is controlled with control signal g10. If g10 is high (1) the gain is 6dB and if g10 is low (0) the gain of the stage is –4dB.

The active channel filters in HAGAR provides selectivity for channels (–3dB @ +/-100 kHz typ.). Integrated base band filter is active–RC–filter with two off–chip capacitors. Large RC–time constants needed in the channel select filter of direct conversion receiver are produced with large off–chip capacitors because the impedance levels could not be increased due to the noise specifications. Baseband filter consists of two stages, DTOS and BIQUAD. DTOS is differential to single–ended converter having 8dB or 18dB gain. BIQUAD is modified Sallen–Key Biquad.

Integrated resistors and capacitors are tunable. These are controlled with a digital control word. The correct control words that compensate for the process variations of integrated resistors and capacitors and of tolerance of off chip capacitors are found with the calibration circuit.

Next stage in the receiver chain is AGC–amplifier, also integrated into HAGAR. AGC has digital gain control via serial mode bus from COBBA IC. AGC–stage provides gain control range (40 dB, 10 dB steps) for the receiver and also the necessary DC compensation. One 10 dB AGC step is implemented in DTOS stages.

DC compensation is made during DCN1 and DCN2 operations (controlled via serial bus). DCN1 is carried out by charging the large external capacitors in AGC stages to a voltage which cause a zero dc–offset. DCN2 set the signal offset to constant value (RXREF 1.2 V). The RXREF signal (from COBBA GJP) is used as a zero level to RX ADCs.

Single ended filtered I/Q–signal is then fed to ADCs in COBBA–IC. Input level for ADC is 1.4 Vpp max.

Transmitter

Transmitter chain consists of final frequency IQ-modulator, dualband power amplifier and a power control loop.

I- and Q-signals are generated by baseband also in COBBA-ASIC. After post filtering (RC-network) they go into IQ-modulator in HAGAR. LO-signal for modulator is generated by VCO and is divided by 2 or by 4 depending on system mode, EGSM/DCS1800. After modulator the TX-signal is amplified and buffered. There are separate outputs for both EGSM and DCS1800. HAGAR TX output level is 5 dBm minimum.

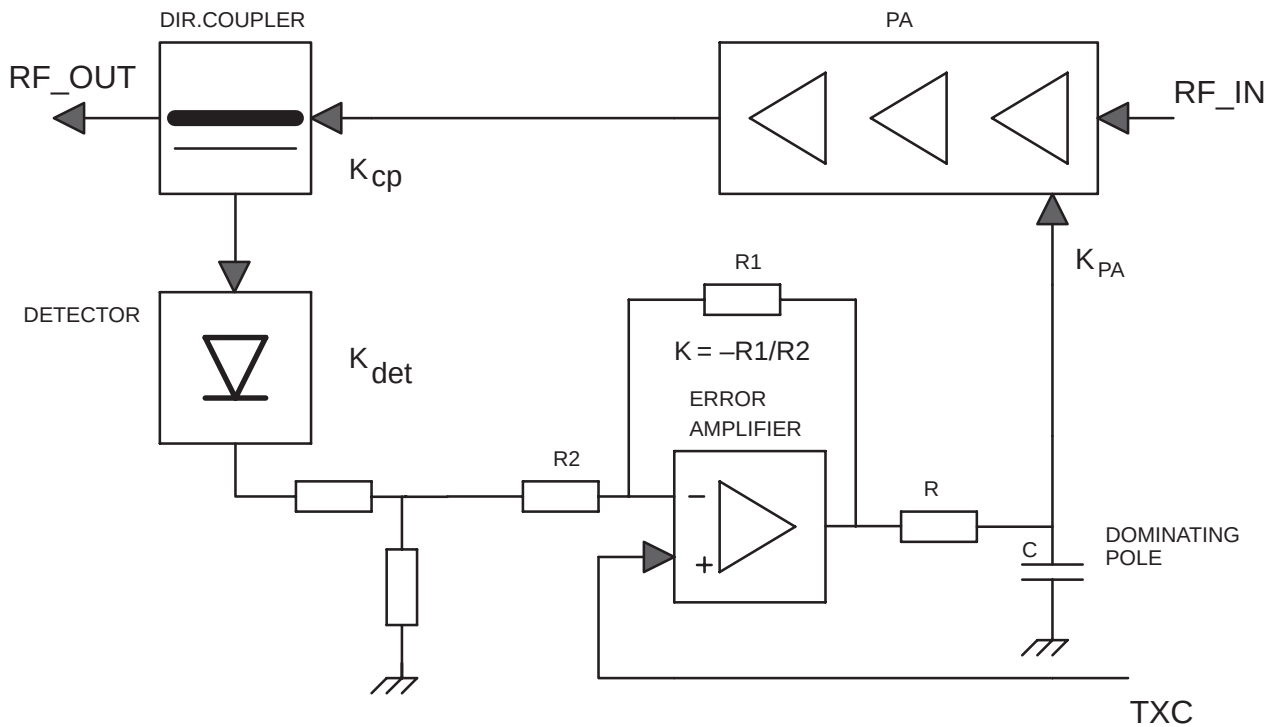
Next TX signals are converted to single ended by discrete baluns. EGSM and DCS1800 branches are compined at a diplexer. In EGSM branch there is a SAW filter before diplexer to attenuate unwanted signals and wideband noise from the Hagar IC.

The final amplification is realized with dualband power amplifier. It has one 50 ohm input and two 50 ohm outputs. There is also a gain control, which is controlled with a power control loop in HAGAR. PA is able to produce over 2 W (3 dBm input level) in EGSM band and over 1 W (6 dBm input level) in DCS1800 band into 50 ohm output. Gain control range is over 35 dB to get desired power levels and power ramping up and down.

Harmonics generated by the nonlinear PA are filtered out with the diplexer inside the antenna switch-module.

Power control circuitry consists of discrete power detector (common for EGSM and DCS1800) and error amplifier in HAGAR. There is a directional coupler connected between PA output and antenna switch. It is a dual-band type and has input and outputs for both systems. Dir. coupler takes a sample from the forward going power with certain ratio. This signal is rectified in a schottky-diode and it produces a DC-signal after filtering.

This detected voltage is compared in the error-amplifier in HAGAR to TXC-voltage, which is generated by DA-converter in COBBA. TXC has got a raised cosine form ($\cos^4$ - function), which reduces switching transients, when pulsing power up and down. Because dynamic range of the detector is not wide enough to control the power (actually RF output voltage) over the whole range, there is a control named TXP to work under detected levels. Burst is enabled and set to rise with TXP until the output level is high enough, that feedback loop works. Loop controls the output via the control pin in PA to the desired output level and burst has got the waveform of TXC-ramps. Because feedback loops could be unstable, this loop is compensated with a dominating pole. This pole decreases gain on higher frequencies to get phase margins high enough. Power control loop in HAGAR has two outputs, one for both freq. bands.



AGC strategy

AGC-amplifier is used to maintain output level of the receiver in certain range. AGC has to be set before each received burst, this is called pre-monitoring.

There is 50 dB accurate gain control (10 dB steps) and one larger step (~30 dB) in LNA. LNA AGC step size depends on channel with some amount.

RSSI must be measured accurately on range -48...-110 dBm. After -48 dBm level MS reports to base station the same reading.

Production calibration is done with two RF-levels, LNA gain step is not calibrated.

AFC function

AFC is used to lock the transceivers clock to frequency of the base station. AFC-voltage is generated in COBBA with 11 bit DA-converter. There is a RC-filter in AFC control line to reduce the noise from the converter. Settling time requirement for the RC-network comes from signaling, how often PSW (pure sine wave) slots occur. They are repeated after 10 frames, meaning that there is PSW in every 46 ms. AFC tracks base station frequency continuously, so transceiver has got a stable frequency, because changes in VCTCXO-output don't occur so fast (temperature).

Settling time requirement comes also from the start up-time allowed. When transceiver is in sleep mode and "wakes" up to receive mode, there is only about 5 ms for the AFC-voltage to settle. When the first burst

comes in system clock has to be settled into ± 0.1 ppm frequency accuracy. The VCTCXO-module requires also 5 ms to settle into final frequency. Amplitude rises into full swing in 1...2 ms, but frequency settling time is higher so this oscillator must be powered up early enough.

DC-compensation

DC compensation is made during DCN1 and DCN2 operations (controlled via serial bus). DCN1 is carried out by charging the large external capacitors in AGC stages to a voltage which cause a zero dc-offset. DCN2 set the signal offset to constant value (RXREF 1.2 V).

Receiver characteristics

Item	Values
Type	Direct conversion, Linear, DualBand, FDMA/TDMA
LO frequencies	3700 ... 3840 MHz / 3610 ... 3760 MHz
Typical 3 dB bandwidth	± 104 kHz
Sensitivity	min. -102 / -100 dBm (EGSM/PCN) , S/N >8 dB
Total typical receiver voltage gain (from antenna to RX ADC)	90 dB
Receiver output level (RF level -95 dBm)	350 mVpp , single ended I/Q-signals to RX ADCs
Typical AGC dynamic range	80 dB
Accurate AGC control range	50 dB
Typical AGC step in LNA	30 dB
Usable input dynamic range	-102 ... -10 dBm
RSSI dynamic range	-110 ... -48 dBm
Compensated gain variation in receiving band	± 1.0 dB

Transmitter characteristics

Item	Values
Type	Direct conversion, dualband, non-linear, FDMA/TDMA
LO frequency range	3520 ... 3660 / 3420 ... 3570 MHz
Output power	2 W / 1 W peak
Gain control range	min. 30 dB
Maximum phase error (RMS/peak)	max 5 deg./20 deg. peak

Parts list of RM7L (EDMS Issue 6.0) Layout 11 Code: 0201386

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R101	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R102	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R103	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R104	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R109	1620017	Res network 0w06 2x100r j		0404
R110	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R111	1430820	Chip resistor	470 k	5 % 0.063 W 0402
R118	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R120	1620025	Res network 0w06 2x100k j		0404
R122	1620019	Res network 0w06 2x10k j		0404
R124	1430726	Chip resistor	100	5 % 0.063 W 0402
R125	1430726	Chip resistor	100	5 % 0.063 W 0402
R128	1430718	Chip resistor	47	5 % 0.063 W 0402
R131	1419003	Chip resistor	0.22	5 % 1210
R154	1430122	Chip resistor	4.7 M	5 % 0.063 W 0603
R201	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R202	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R203	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R205	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R206	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R211	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R215	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R216	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R252	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R256	1430718	Chip resistor	47	5 % 0.063 W 0402
R257	1430718	Chip resistor	47	5 % 0.063 W 0402
R258	1430744	Chip resistor	470	5 % 0.063 W 0402
R260	1430726	Chip resistor	100	5 % 0.063 W 0402
R261	1430744	Chip resistor	470	5 % 0.063 W 0402
R265	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R266	1430806	Chip resistor	120 k	5 % 0.063 W 0402
R267	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R268	1430744	Chip resistor	470	5 % 0.063 W 0402
R269	1620025	Res network 0w06 2x100k j		0404
R270	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R271	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R272	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R273	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R274	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R275	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R276	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R277	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R281	1620017	Res network 0w06 2x100r j		0404
R285	1825021	Chip varistor vwm14v vc46v		0402

R286	1825021	Chip varistor vwm14v vc46v		0402
R287	1825021	Chip varistor vwm14v vc46v		0402
R310	1430780	Chip resistor	12 k	5 % 0.063 W 0402
R311	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R350	1430389	Chip resistor	18	5 % 0.1 W 0603
R351	1430389	Chip resistor	18	5 % 0.1 W 0603
R352	1430389	Chip resistor	18	5 % 0.1 W 0603
R353	1430389	Chip resistor	18	5 % 0.1 W 0603
R371	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R372	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R373	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R374	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R403	1430702	Chip resistor	12	5 % 0.063 W 0402
R404	1430702	Chip resistor	12	5 % 0.063 W 0402
R510	1620003	Res network 0w03 4x100r j		0804
R530	1620019	Res network 0w06 2x10k j		0404
R532	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R533	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R541	1620033	Res network 0w06 2x5k6 j		0404
R546	1620033	Res network 0w06 2x5k6 j		0404
R563	1430187	Chip resistor	47 k	1 % 0.063 W 0402
R564	1430746	Chip resistor	560	5 % 0.063 W 0402
R565	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R610	1430726	Chip resistor	100	5 % 0.063 W 0402
R611	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R613	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R614	1620017	Res network 0w06 2x100r j		0404
R640	1430732	Chip resistor	180	5 % 0.063 W 0402
R643	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R645	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R670	1430730	Chip resistor	150	5 % 0.063 W 0402
R671	1430730	Chip resistor	150	5 % 0.063 W 0402
R700	1430726	Chip resistor	100	5 % 0.063 W 0402
R704	1430726	Chip resistor	100	5 % 0.063 W 0402
R710	1430702	Chip resistor	12	5 % 0.063 W 0402
R711	1430734	Chip resistor	220	5 % 0.063 W 0402
R712	1430702	Chip resistor	12	5 % 0.063 W 0402
R723	1620505	Res network 0w04		2DB ATT 0400404
R730	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R731	1430740	Chip resistor	330	5 % 0.063 W 0402
R732	1430746	Chip resistor	560	5 % 0.063 W 0402
R740	1430734	Chip resistor	220	5 % 0.063 W 0402
R741	1430734	Chip resistor	220	5 % 0.063 W 0402
R744	1430726	Chip resistor	100	5 % 0.063 W 0402
R751	1430734	Chip resistor	220	5 % 0.063 W 0402
R754	1430718	Chip resistor	47	5 % 0.063 W 0402
R755	1430714	Chip resistor	33	5 % 0.063 W 0402
R756	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R757	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402

R758	1430710	Chip resistor	22	5 % 0.063 W 0402
R763	1430740	Chip resistor	330	5 % 0.063 W 0402
R764	1430758	Chip resistor	1.5 k	5 % 0.063 W 0402
R781	1430690	Chip jumper		0402
R790	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R791	1430756	Chip resistor	1.2 k	5 % 0.063 W 0402
R792	1430848	Chip resistor	12 k	1 % 0.063 W 0402
R800	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R801	1430841	Chip resistor	6.8 k	1 % 0.063 W 0402
R802	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R805	1620505	Res network 0w04		2DB ATT 0400404
R807	1430726	Chip resistor	100	5 % 0.063 W 0402
R829	1430752	Chip resistor	820	5 % 0.063 W 0402
R830	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R831	1430718	Chip resistor	47	5 % 0.063 W 0402
R832	1430788	Chip resistor	22 k	5 % 0.063 W 0402
R833	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R834	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R974	1430746	Chip resistor	560	5 % 0.063 W 0402
R975	1430740	Chip resistor	330	5 % 0.063 W 0402
C101	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C102	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C103	2312411	Ceramic cap.	1.0 u	20 % 25 V 1206
C104	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C105	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C106	2320481	Ceramic cap.	5R 1 u	10 % 0603
C107	2320481	Ceramic cap.	5R 1 u	10 % 0603
C108	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C109	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C110	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C113	2320508	Ceramic cap.	1.0 p	0.25 % 50 V 0402
C114	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C116	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C119	2320481	Ceramic cap.	5R 1 u	10 % 0603
C120	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C121	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C127	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C128	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C129	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C131	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C132	2310793	Ceramic cap.	2.2 u	10 % 10 V 0805
C133	2320481	Ceramic cap.	5R 1 u	10 % 0603
C140	2320481	Ceramic cap.	5R 1 u	10 % 0603
C142	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C150	2320481	Ceramic cap.	5R 1 u	10 % 0603
C151	2320481	Ceramic cap.	5R 1 u	10 % 0603

C152	2320481	Ceramic cap.	5R 1 u	10 % 0603
C153	2320481	Ceramic cap.	5R 1 u	10 % 0603
C154	2320481	Ceramic cap.	5R 1 u	10 % 0603
C160	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C161	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C162	2320522	Ceramic cap.	2.7 p	0.25 % 50 V 0402
C163	2320522	Ceramic cap.	2.7 p	0.25 % 50 V 0402
C165	2611737	Tantalum cap.	68 u	20 % 16 V
7.3x4.3x2.0				
C201	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C203	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C204	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C205	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C206	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C207	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C208	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C209	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C211	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C212	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C213	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C217	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C218	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C220	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C247	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C248	2320481	Ceramic cap.	5R 1 u	10 % 0603
C251	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C253	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C255	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C257	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C258	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C259	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C261	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C262	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C263	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C264	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C268	2320481	Ceramic cap.	5R 1 u	10 % 0603
C270	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C274	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C276	2320481	Ceramic cap.	5R 1 u	10 % 0603
C278	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C283	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C284	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C285	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C286	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C287	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C291	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C292	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C293	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C294	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402

C295	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C296	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C297	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C310	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C330	2320481	Ceramic cap.	5R 1 u	10 % 0603
C331	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C342	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C371	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C372	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C373	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C400	2320481	Ceramic cap.	5R 1 u	10 % 0603
C401	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C405	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C406	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C510	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C511	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C512	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C513	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C520	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C521	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C522	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C523	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C530	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C531	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C532	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C533	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C534	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C535	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C540	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C541	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C550	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C557	2320554	Ceramic cap.	56 p	5 % 50 V 0402
C560	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C561	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C562	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C564	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C600	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C601	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C610	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C611	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C612	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C613	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C614	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C615	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C620	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C621	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C630	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C631	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C640	2320516	Ceramic cap.	1.5 p	0.25 % 50 V 0402

C642	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C643	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C644	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C645	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C700	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C702	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C703	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C704	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C714	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C720	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C730	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C731	2320756	Ceramic cap.	3.3 n	10 % 50 V 0402
C733	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C741	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C742	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C743	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C746	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C747	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C754	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C755	2320481	Ceramic cap.	5R 1 u	10 % 0603
C757	2320514	Ceramic cap.	1.2 p	0.25 % 50 V 0402
C758	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C759	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C760	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C761	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C762	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C782	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
C783	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C785	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C788	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C790	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C792	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C793	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C799	2320534	Ceramic cap.	8.2 p	0.25 % 50 V 0402
C801	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C802	2312221	Ceramic cap.	4.7 n	5 % 25 V 0805
C803	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C804	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C805	2610203	Tantalum cap.	2.2 u	20 % 10 V
2.0x1.3x1.2				
C829	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C830	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C831	2310793	Ceramic cap.	2.2 u	10 % 10 V 0805
C832	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C833	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C834	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C835	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C836	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C860	2320548	Ceramic cap.	33 p	5 % 50 V 0402

C862	2320520	Ceramic cap.	2.2 p	0.25 % 50 V 0402
C863	2320536	Ceramic cap.	10 p	5 % 50 V 0402
L103	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L104	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L271	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L272	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L283	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L284	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L287	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L503	3646051	Chip coil	3 n	Q=28/800M 0402
L504	3646063	Chip coil	22 n	5 % Q=28/800 MHz
L505	3646053	Chip coil	4 n	Q=28/800M 0402
L506	3646053	Chip coil	4 n	Q=28/800M 0402
L510	3646059	Chip coil	5 n	Q=28/800M 0402
L553	4551013	Dir.coupl.897.5/1747.5mhz	2.1x1.3	2.1x1.3
L600	3646069	Chip coil	33 n	5 % Q=23/800 MHz
L631	3646065	Chip coil	12 n	5 % Q=31/800 MHz
L751	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L752	3645201	Chip coil	56 n	5 % Q=38/200 MHz
L800	3648808	Chip coil		10 % Q=50 1206
B100	4510219	Crystal	32.768 k	+−30PPM 9PF
B301	5140157	Buzzer 85db 3000hz 3.0v	8.5x8.5x	8.5x8.5x3
G800	4350223	Vco 3420−3840mhz 2.7v 20ma	9x7	9X7
G830	4510261	VCTCXO	26 M	+−5PPM 2.7V GSM
F101	5119019	SM, fuse f 1.5a 32v	0603	
Z600	4511149	Dual saw filt925−960/1805−1880mhz		
Z620	4511149	Dual saw filt925−960/1805−1880mhz		
Z670	4550201	Dipl+2xsw880−960/1710−1880mhz	7x5	7X5
Z671	4550067	Dipl 880−960/1710−1880mhz	3.2x2.5	3.2x2.5
Z700	4511147	Saw filter	897.5+−17.5 M	/3DB 3X3 3X3
H400	9517046	Rf−can dmd05114 nsm−3		
T600	3640405	Transf balun 900mhz+−100mhz	1210	1210
T630	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T700	3640405	Transf balun 900mhz+−100mhz	1210	1210
T740	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T800	3640423	Transf balun 3.7ghz+−300mhz	0805	0805
V100	1825023	Chip varistor vwm9v vc20v	0805	0805
V101	4210052	Transistor	DTC114EE	nnp RB V EM3
V104	4113671	Tvs quad 6v1 esda6v1w5	sot323−5	SOT323−5
V116	4110067	Schottky diode	MBR0520L	20 V 0.5 A SOD123
V250	4210100	Transistor	BC848W	nnp 30 V SOT323
V251	4210100	Transistor	BC848W	nnp 30 V SOT323
V252	4210052	Transistor	DTC114EE	nnp RB V EM3
V320	4860005	Led	Green	0603

V321	4860005	Led	Green	0603
V322	4860005	Led	Green	0603
V323	4860005	Led	Green	0603
V324	4860005	Led	Green	0603
V325	4860005	Led	Green	0603
V331	4864389	Led		0603
V332	4864389	Led		0603
V333	4864389	Led		0603
V334	4864389	Led		0603
V335	4864389	Led		0603
V336	4864389	Led		0603
V350	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V360	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V730	4110014	Sch. diode x 2	BAS70-07	70 V 15 mA SOT143
V800	4210100	Transistor	BC848W	npn 30 V SOT323
V801	4210183	Transistor	BFP193W	npn 8G V SOT343
V903	4210015	Transistor	BFP405	npn 4. V SOT343
V904	4210074	Transistor	BFP420	npn 4. V SOT343
V905	4210100	Transistor	BC848W	npn 30 V SOT323
V907	4210100	Transistor	BC848W	npn 30 V SOT323
D200	4370593	Mad2wd1 v9 f731635a c07		UBGA144
D210	4340747	Combomemory 16m flash+2m sram		CSP
N100	4370467	Ccont2i wfd163kg64t/8		lfbga8x8
N101	4370621	Chaps v2.0 u423v20g36t		lbga6x6
N220	4340413	IC, regulator	TK11230BMC	3.0 V SOT23L
N250	4370643	Cobba_gjp v4.1 v257bg64t/8		BGA64
N310	4370433	Uiswitch sttm23av20t		TSSOP20
N400	4860081	Irda qsdl-m134#021 115.2kbps 2v7		2V7
N401	4340335	IC, regulator	TK11228AM	SSO6
N505	4370599	Hagar 1 sttza8fg80t		LFBGA80
N600	4340433	IC, regulator	TK11245BMC	4.5 V SOT23L
N702	4350203	IC, pow.amp.		3.5 V 3.5V
S330	5209001	SM, sw tact spst 12v 50ma side k		KEY
M300	9854352	PC board	UX7V	4.5x4.5x1.6 d 140/pa
	9854352	PCB UX7V	4.5X4.5X1.6 D	140/PA
	9854413	PCB RM7L		94.8X40X1 M8 4/PA

Parts list of RM7L (EDMS Issue 10.1) Layout 16 Code: 0201386

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R101	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R102	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R103	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R104	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R109	1620017	Res network 0w06 2x100r j	0404	0404
R110	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R111	1430820	Chip resistor	470 k	5 % 0.063 W 0402
R118	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R120	1620025	Res network 0w06 2x100k j	0404	0404
R122	1620019	Res network 0w06 2x10k j	0404	0404
R124	1430726	Chip resistor	100	5 % 0.063 W 0402
R125	1430726	Chip resistor	100	5 % 0.063 W 0402
R128	1430718	Chip resistor	47	5 % 0.063 W 0402
R131	1419003	Chip resistor	0.22	5 % 1210
R154	1430325	Chip resistor	2.2 M	5 % 0.063 W 0603
R201	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R202	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R203	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R205	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R206	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R211	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R215	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R216	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R252	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R256	1430718	Chip resistor	47	5 % 0.063 W 0402
R257	1430718	Chip resistor	47	5 % 0.063 W 0402
R258	1430744	Chip resistor	470	5 % 0.063 W 0402
R260	1430726	Chip resistor	100	5 % 0.063 W 0402
R261	1430744	Chip resistor	470	5 % 0.063 W 0402
R265	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R266	1430806	Chip resistor	120 k	5 % 0.063 W 0402
R267	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R268	1430744	Chip resistor	470	5 % 0.063 W 0402
R269	1620025	Res network 0w06 2x100k j	0404	0404
R270	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R271	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R272	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R273	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R274	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R275	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R276	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R277	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R281	1620017	Res network 0w06 2x100r j	0404	0404
R285	1825021	Chip varistor vwm14v vc46v	0402	0402

R286	1825021	Chip varistor vwm14v vc46v	0402	0402
R287	1825021	Chip varistor vwm14v vc46v	0402	0402
R310	1430780	Chip resistor	12 k	5 % 0.063 W 0402
R311	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R350	1430389	Chip resistor	18	5 % 0.1 W 0603
R351	1430389	Chip resistor	18	5 % 0.1 W 0603
R352	1430389	Chip resistor	18	5 % 0.1 W 0603
R353	1430389	Chip resistor	18	5 % 0.1 W 0603
R371	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R372	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R373	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R374	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R403	1430702	Chip resistor	12	5 % 0.063 W 0402
R404	1430702	Chip resistor	12	5 % 0.063 W 0402
R510	1620003	Res network 0w03 4x100r j	0804	0804
R530	1620019	Res network 0w06 2x10k j	0404	0404
R532	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R533	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R541	1620033	Res network 0w06 2x5k6 j	0404	0404
R546	1620033	Res network 0w06 2x5k6 j	0404	0404
R563	1430187	Chip resistor	47 k	1 % 0.063 W 0402
R564	1430746	Chip resistor	560	5 % 0.063 W 0402
R565	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R610	1430726	Chip resistor	100	5 % 0.063 W 0402
R611	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R613	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R614	1620017	Res network 0w06 2x100r j	0404	0404
R640	1430732	Chip resistor	180	5 % 0.063 W 0402
R643	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R645	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R670	1430730	Chip resistor	150	5 % 0.063 W 0402
R671	1430730	Chip resistor	150	5 % 0.063 W 0402
R700	1430726	Chip resistor	100	5 % 0.063 W 0402
R704	1430726	Chip resistor	100	5 % 0.063 W 0402
R710	1430702	Chip resistor	12	5 % 0.063 W 0402
R711	1430734	Chip resistor	220	5 % 0.063 W 0402
R712	1430702	Chip resistor	12	5 % 0.063 W 0402
R723	1620505	Res network 0w04		2DB ATT 0400404
R730	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R731	1430740	Chip resistor	330	5 % 0.063 W 0402
R732	1430746	Chip resistor	560	5 % 0.063 W 0402
R740	1430726	Chip resistor	100	5 % 0.063 W 0402
R741	1430726	Chip resistor	100	5 % 0.063 W 0402
R742	1430726	Chip resistor	100	5 % 0.063 W 0402
R744	1430726	Chip resistor	100	5 % 0.063 W 0402
R751	1430734	Chip resistor	220	5 % 0.063 W 0402
R754	1430718	Chip resistor	47	5 % 0.063 W 0402
R755	1430714	Chip resistor	33	5 % 0.063 W 0402
R756	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402

R757	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R758	1430710	Chip resistor	22	5 % 0.063 W 0402
R763	1430740	Chip resistor	330	5 % 0.063 W 0402
R764	1430758	Chip resistor	1.5 k	5 % 0.063 W 0402
R781	1430690	Chip jumper		0402
R790	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R791	1430756	Chip resistor	1.2 k	5 % 0.063 W 0402
R792	1430848	Chip resistor	12 k	1 % 0.063 W 0402
R800	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R801	1430841	Chip resistor	6.8 k	1 % 0.063 W 0402
R802	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R805	1620505	Res network 0w04		2DB ATT 0400404
R807	1430728	Chip resistor	120	5 % 0.063 W 0402
R829	1430752	Chip resistor	820	5 % 0.063 W 0402
R830	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R831	1430718	Chip resistor	47	5 % 0.063 W 0402
R832	1430788	Chip resistor	22 k	5 % 0.063 W 0402
R833	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R834	1430812	Chip resistor	220 k	5 % 0.063 W 0402
C101	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C102	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C103	2312411	Ceramic cap.	1.0 u	20 % 25 V 1206
C104	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C105	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C106	2320481	Ceramic cap.	5R 1 u	10 % 0603
C107	2320481	Ceramic cap.	5R 1 u	10 % 0603
C108	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C109	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C110	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C113	2320508	Ceramic cap.	1.0 p	0.25 % 50 V 0402
C114	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C116	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C119	2320481	Ceramic cap.	5R 1 u	10 % 0603
C120	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C121	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C127	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C128	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C129	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C131	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C132	2611741	Tantalum cap.	4.7 u	20 % 10 V
2.0x1.3x1.2				
C133	2320481	Ceramic cap.	5R 1 u	10 % 0603
C140	2320481	Ceramic cap.	5R 1 u	10 % 0603
C142	2611719	Tantalum cap.	10 u	20 % 10 V
2.0x1.35x1.35				
C150	2320481	Ceramic cap.	5R 1 u	10 % 0603
C151	2320481	Ceramic cap.	5R 1 u	10 % 0603

C152	2320481	Ceramic cap.	5R 1 u	10 % 0603
C153	2320481	Ceramic cap.	5R 1 u	10 % 0603
C154	2320481	Ceramic cap.	5R 1 u	10 % 0603
C160	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C161	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C162	2320522	Ceramic cap.	2.7 p	0.25 % 50 V 0402
C163	2320522	Ceramic cap.	2.7 p	0.25 % 50 V 0402
C164	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C165	2611737	Tantalum cap.	68 u	20 % 16 V
7.3x4.3x2.0				
C168	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C201	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C203	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C204	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C205	2610203	Tantalum cap.	2.2 u	20 % 10 V
2.0x1.3x1.2				
C206	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C207	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C208	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C209	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C211	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C212	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C213	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C217	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C218	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C220	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C247	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C248	2320481	Ceramic cap.	5R 1 u	10 % 0603
C251	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C253	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C255	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C257	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C258	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C259	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C261	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C262	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C263	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C264	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C268	2320481	Ceramic cap.	5R 1 u	10 % 0603
C270	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C274	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C276	2320481	Ceramic cap.	5R 1 u	10 % 0603
C278	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C283	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C284	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C285	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C286	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C287	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C291	2320546	Ceramic cap.	27 p	5 % 50 V 0402

C292	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C293	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C294	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C295	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C296	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C297	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C310	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C330	2320481	Ceramic cap.	5R 1 u	10 % 0603
C331	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C342	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C371	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C372	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C373	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C400	2320481	Ceramic cap.	5R 1 u	10 % 0603
C401	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C405	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C406	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C510	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C511	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C512	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C513	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C520	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C521	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C522	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C523	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C530	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C531	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C532	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C533	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C534	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C535	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C540	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C541	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C550	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C557	2320554	Ceramic cap.	56 p	5 % 50 V 0402
C560	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C561	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C562	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C564	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C600	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C601	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C610	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C611	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C612	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C613	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C614	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C615	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C620	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C621	2320805	Ceramic cap.	100 n	10 % 10 V 0402

C630	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C631	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C640	2320516	Ceramic cap.	1.5 p	0.25 % 50 V 0402
C642	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C643	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C644	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C645	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C700	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C702	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C703	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C704	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C714	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C720	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C730	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C731	2320756	Ceramic cap.	3.3 n	10 % 50 V 0402
C733	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C741	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C743	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C746	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C747	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C754	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C755	2320481	Ceramic cap.	5R 1 u	10 % 0603
C757	2320514	Ceramic cap.	1.2 p	0.25 % 50 V 0402
C758	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C759	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C760	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C761	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C762	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C782	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
C783	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C785	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C788	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C790	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C792	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C793	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C799	2320534	Ceramic cap.	8.2 p	0.25 % 50 V 0402
C801	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C802	2312221	Ceramic cap.	4.7 n	5 % 25 V 0805
C803	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C804	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C805	2610203	Tantalum cap.	2.2 u	20 % 10 V
2.0x1.3x1.2				
C829	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C830	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C831	2310793	Ceramic cap.	2.2 u	10 % 10 V 0805
C832	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C833	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C834	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C835	2320540	Ceramic cap.	15 p	5 % 50 V 0402

C836	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C860	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C861	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C862	2320520	Ceramic cap.	2.2 p	0.25 % 50 V 0402
C863	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C864	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
L103	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L104	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L271	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L272	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L283	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L284	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L287	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L503	3646051	Chip coil	3 n	Q=28/800M 0402
L504	3646063	Chip coil	22 n	5 % Q=28/800 MHz
0402				
L505	3646051	Chip coil	3 n	Q=28/800M 0402
L506	3646053	Chip coil	4 n	Q=28/800M 0402
L510	3646059	Chip coil	5 n	Q=28/800M 0402
L553	4551013	Dir.coupl.897.5/1747.5mhz	2.1x1.3	2.1x1.3
L600	3646069	Chip coil	33 n	5 % Q=23/800 MHz
0402				
L631	3646065	Chip coil	12 n	5 % Q=31/800 MHz
0402				
L751	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L752	3645201	Chip coil	56 n	5 % Q=38/200 MHz
0603				
L800	3648808	Chip coil		10 % Q=50 1206
B100	4510219	Crystal	32.768 k	+−30PPM 9PF
B301	5140157	Buzzer 85db 3000hz 3.0v	8.5x8.5x	8.5x8.5x3
G800	4350223	Vco 3420−3840mhz 2.7v 20ma	9x7	9X7
G830	4510261	VCTCXO 26 M+−5PPM 2.7V GSM		
F101	5119019	SM, fuse f 1.5a 32v	0603	
Z600	4511149	Dual saw filt925−960/1805−1880mhz		
Z620	4511149	Dual saw filt925−960/1805−1880mhz		
Z670	4550201	Dipl+2xsw880−960/1710−1880mhz	7x5	7X5
Z671	4550067	Dipl 880−960/1710−1880mhz	3.2x2.5	3.2x2.5
Z700	4511147	Saw filter	897.5+−17.5 M	/3DB 3X3 3X3
H400	9517046	Rf−can dmd05114 nsm−3		
T600	3640405	Transf balun 900mhz+−100mhz	1210	1210
T630	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T700	3640405	Transf balun 900mhz+−100mhz	1210	1210
T740	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T800	3640423	Transf balun 3.7ghz+−300mhz	0805	0805
V100	1825023	Chip varistor vwm9v vc20v	0805	0805
V101	4210052	Transistor	DTC114EE	nnp RB V EM3
V104	4113671	Tvs quad 6v1 esda6v1w5	sot323−5	SOT323−5
V116	4110067	Schottky diode	MBR0520L	20 V 0.5 A SOD123
V250	4210100	Transistor	BC848W	nnp 30 V SOT323

V251	4210100	Transistor	BC848W	npn 30 V SOT323
V252	4210052	Transistor	DTC114EE	npn RB V EM3
V320	4860005	Led	Green	0603
V321	4860005	Led	Green	0603
V322	4860005	Led	Green	0603
V323	4860005	Led	Green	0603
V324	4860005	Led	Green	0603
V325	4860005	Led	Green	0603
V331	4864389	Led		0603
V332	4864389	Led		0603
V333	4864389	Led		0603
V334	4864389	Led		0603
V335	4864389	Led		0603
V336	4864389	Led		0603
V350	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V360	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V730	4110014	Sch. diode x 2	BAS70-07	70 V 70 mA SOT143
V800	4210100	Transistor	BC848W	npn 30 V SOT323
V801	4210183	Transistor	BFP193W	npn 8G V SOT343
V903	4210015	Transistor	BFP405	npn 4. V SOT343
V904	4210074	Transistor	BFP420	npn 4. V SOT343
V905	4210100	Transistor	BC848W	npn 30 V SOT323
V907	4210100	Transistor	BC848W	npn 30 V SOT323
D200	4370677	Mad2wd1 v18 rom5 f741541g		UBGA144
D210	4340747	Combomemory 16m flash+2m sram csp		CSP
N100	4370719	Ccont 2m wfd163mg64t/8		lfbga8x8
N101	4370621	Chaps v2.0 u423v20g36t		lbga6x6
N220	4340413	IC, regulator	TK11230BMC	3.0 V SOT23L
N250	4370643	Cobba_gjp v4.1 v257bg64t/8		BGA64
N310	4370433	Uiswitch sttm23av20t		TSSOP20
N400	4860081	Irda qsdl-m134#021 115.2kbps 2v7		2V7
N401	4340335	IC, regulator	TK11228AM	SSO6
N505	4370667	Hagar 3 sttza8hg80t	I	LFBGA80
N600	4340719	IC, regulator	TK11247BMC	4.7 V SOT23L
N702	4350203	IC, pow.amp.		3.5 V 3.5V
S330	5209001	SM, sw tact spst 12v 50ma side k		KEY
M300	9854352	PC board	UX7V	4.5x4.5x1.6 d 140/pa
	9854413	PC board	RM7L	94.8x40x1 m8 4/pa

Parts list of RM7L (EDMS Issue 11.2) Layout 18 Code: 0201386

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R101	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R102	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R103	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R104	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R109	1620017	Res network 0w06 2x100r j	0404	0404
R110	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R111	1430820	Chip resistor	470 k	5 % 0.063 W 0402
R118	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R120	1620025	Res network 0w06 2x100k j	0404	0404
R122	1620019	Res network 0w06 2x10k j	0404	0404
R124	1430726	Chip resistor	100	5 % 0.063 W 0402
R125	1430726	Chip resistor	100	5 % 0.063 W 0402
R128	1430718	Chip resistor	47	5 % 0.063 W 0402
R131	1419003	Chip resistor	0.22	5 % 1210
R154	1430325	Chip resistor	2.2 M	5 % 0.063 W 0603
R201	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R202	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R203	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R205	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R206	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R211	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R215	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R216	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R252	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R256	1430718	Chip resistor	47	5 % 0.063 W 0402
R257	1430718	Chip resistor	47	5 % 0.063 W 0402
R258	1430744	Chip resistor	470	5 % 0.063 W 0402
R260	1430726	Chip resistor	100	5 % 0.063 W 0402
R261	1430744	Chip resistor	470	5 % 0.063 W 0402
R265	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R266	1430806	Chip resistor	120 k	5 % 0.063 W 0402
R267	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R268	1430744	Chip resistor	470	5 % 0.063 W 0402
R269	1620025	Res network 0w06 2x100k j	0404	0404
R270	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R271	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R272	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R273	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R274	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R275	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R276	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R277	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R281	1620017	Res network 0w06 2x100r j	0404	0404
R285	1825021	Chip varistor vwm14v vc46v	0402	0402

R286	1825021	Chip varistor vwm14v vc46v	0402	0402
R287	1825021	Chip varistor vwm14v vc46v	0402	0402
R310	1430780	Chip resistor	12 k	5 % 0.063 W 0402
R311	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R350	1430389	Chip resistor	18	5 % 0.1 W 0603
R351	1430389	Chip resistor	18	5 % 0.1 W 0603
R352	1430389	Chip resistor	18	5 % 0.1 W 0603
R353	1430389	Chip resistor	18	5 % 0.1 W 0603
R371	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R372	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R373	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R374	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R403	1430702	Chip resistor	12	5 % 0.063 W 0402
R404	1430702	Chip resistor	12	5 % 0.063 W 0402
R510	1620003	Res network 0w03 4x100r j	0804	0804
R530	1620019	Res network 0w06 2x10k j	0404	0404
R532	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R533	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R541	1620033	Res network 0w06 2x5k6 j	0404	0404
R546	1620033	Res network 0w06 2x5k6 j	0404	0404
R563	1430187	Chip resistor	47 k	1 % 0.063 W 0402
R564	1430746	Chip resistor	560	5 % 0.063 W 0402
R565	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R610	1430726	Chip resistor	100	5 % 0.063 W 0402
R611	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R613	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R614	1620017	Res network 0w06 2x100r j	0404	0404
R640	1430732	Chip resistor	180	5 % 0.063 W 0402
R643	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R645	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R670	1430730	Chip resistor	150	5 % 0.063 W 0402
R671	1430730	Chip resistor	150	5 % 0.063 W 0402
R700	1430726	Chip resistor	100	5 % 0.063 W 0402
R704	1430726	Chip resistor	100	5 % 0.063 W 0402
R710	1430702	Chip resistor	12	5 % 0.063 W 0402
R711	1430734	Chip resistor	220	5 % 0.063 W 0402
R712	1430702	Chip resistor	12	5 % 0.063 W 0402
R723	1620505	Res network 0w04		2DB ATT 0400404
R730	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R731	1430740	Chip resistor	330	5 % 0.063 W 0402
R732	1430746	Chip resistor	560	5 % 0.063 W 0402
R740	1430726	Chip resistor	100	5 % 0.063 W 0402
R741	1430726	Chip resistor	100	5 % 0.063 W 0402
R742	1430726	Chip resistor	100	5 % 0.063 W 0402
R744	1430726	Chip resistor	100	5 % 0.063 W 0402
R751	1430734	Chip resistor	220	5 % 0.063 W 0402
R754	1430718	Chip resistor	47	5 % 0.063 W 0402
R755	1430714	Chip resistor	33	5 % 0.063 W 0402
R756	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402

R757	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R758	1430710	Chip resistor	22	5 % 0.063 W 0402
R763	1430740	Chip resistor	330	5 % 0.063 W 0402
R764	1430758	Chip resistor	1.5 k	5 % 0.063 W 0402
R781	1430690	Chip jumper		0402
R790	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R791	1430756	Chip resistor	1.2 k	5 % 0.063 W 0402
R792	1430848	Chip resistor	12 k	1 % 0.063 W 0402
R800	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R801	1430841	Chip resistor	6.8 k	1 % 0.063 W 0402
R802	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R805	1620505	Res network 0w04		2DB ATT 0400404
R807	1430728	Chip resistor	120	5 % 0.063 W 0402
R829	1430752	Chip resistor	820	5 % 0.063 W 0402
R830	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R831	1430718	Chip resistor	47	5 % 0.063 W 0402
R832	1430788	Chip resistor	22 k	5 % 0.063 W 0402
R833	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R834	1430812	Chip resistor	220 k	5 % 0.063 W 0402
C101	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C102	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C103	2312411	Ceramic cap.	1.0 u	20 % 25 V 1206
C104	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C105	2611747	Tantalum cap.	10 u	20 % 10 V
2.0x1.3x1.5				
C106	2320481	Ceramic cap.	5R 1 u	10 % 0603
C107	2320481	Ceramic cap.	5R 1 u	10 % 0603
C108	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C109	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C110	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C113	2320508	Ceramic cap.	1.0 p	0.25 % 50 V 0402
C114	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C116	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C119	2320481	Ceramic cap.	5R 1 u	10 % 0603
C120	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C121	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C127	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C128	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C129	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C131	2611747	Tantalum cap.	10 u	20 % 10 V
2.0x1.3x1.5				
C132	2611741	Tantalum cap.	4.7 u	20 % 10 V
2.0x1.3x1.2				
C133	2320481	Ceramic cap.	5R 1 u	10 % 0603
C140	2320481	Ceramic cap.	5R 1 u	10 % 0603
C142	2611747	Tantalum cap.	10 u	20 % 10 V
2.0x1.3x1.5				
C150	2320481	Ceramic cap.	5R 1 u	10 % 0603
C151	2320481	Ceramic cap.	5R 1 u	10 % 0603

C152	2320481	Ceramic cap.	5R 1 u	10 % 0603
C153	2320481	Ceramic cap.	5R 1 u	10 % 0603
C154	2320481	Ceramic cap.	5R 1 u	10 % 0603
C160	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C161	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C162	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C163	2320522	Ceramic cap.	2.7 p	0.25 % 50 V 0402
C164	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C165	2611737	Tantalum cap.	68 u	20 % 16 V
7.3x4.3x2.0				
C168	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C201	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C203	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C204	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C205	2610203	Tantalum cap.	2.2 u	20 % 10 V
2.0x1.3x1.2				
C206	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C207	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C208	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C209	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C211	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C212	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C213	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C217	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C218	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C220	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C247	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C248	2320481	Ceramic cap.	5R 1 u	10 % 0603
C251	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C253	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C255	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C257	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C258	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C259	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C261	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C262	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C263	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C264	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C268	2320481	Ceramic cap.	5R 1 u	10 % 0603
C270	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C274	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C276	2320481	Ceramic cap.	5R 1 u	10 % 0603
C278	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C283	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C284	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C285	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C286	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C287	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C291	2320546	Ceramic cap.	27 p	5 % 50 V 0402

C292	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C293	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C294	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C295	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C296	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C297	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C310	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C330	2320481	Ceramic cap.	5R 1 u	10 % 0603
C331	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C342	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C371	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C372	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C373	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C400	2320481	Ceramic cap.	5R 1 u	10 % 0603
C401	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C405	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C406	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C510	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C511	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C512	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C513	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C520	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C521	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C522	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C523	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C530	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C531	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C532	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C533	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C534	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C535	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C540	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C541	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C550	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C557	2320554	Ceramic cap.	56 p	5 % 50 V 0402
C560	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C561	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C562	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C564	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C600	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C601	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C610	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C611	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C612	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C613	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C614	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C615	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C620	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C621	2320805	Ceramic cap.	100 n	10 % 10 V 0402

C630	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C631	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C640	2320516	Ceramic cap.	1.5 p	0.25 % 50 V 0402
C642	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C643	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C644	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C645	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C700	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C702	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C703	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C704	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C714	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C720	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C730	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C731	2320756	Ceramic cap.	3.3 n	10 % 50 V 0402
C733	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C741	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C743	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C746	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C747	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C754	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C755	2320481	Ceramic cap.	5R 1 u	10 % 0603
C757	2320514	Ceramic cap.	1.2 p	0.25 % 50 V 0402
C758	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C759	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C760	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C761	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C762	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C782	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
C783	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C785	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C788	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C790	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C792	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C793	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C799	2320534	Ceramic cap.	8.2 p	0.25 % 50 V 0402
C801	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C802	2312221	Ceramic cap.	4.7 n	5 % 25 V 0805
C803	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C804	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C805	2610203	Tantalum cap.	2.2 u	20 % 10 V
2.0x1.3x1.2				
C829	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C830	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C831	2310793	Ceramic cap.	2.2 u	10 % 10 V 0805
C832	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C833	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C834	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C835	2320540	Ceramic cap.	15 p	5 % 50 V 0402

C836	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C860	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C861	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C862	2320520	Ceramic cap.	2.2 p	0.25 % 50 V 0402
C863	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C864	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
L103	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L104	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L271	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L272	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L283	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L284	3640035	Filt z>450r/100m 0r7max 0.2a	0603	0603
L287	3203709	Ferrite bead 0.5r 120r/100m	0402	0402
L503	3646051	Chip coil	3 n	Q=28/800M 0402
L504	3646063	Chip coil	22 n	5 % Q=28/800 MHz
0402				
L505	3646051	Chip coil	3 n	Q=28/800M 0402
L506	3646053	Chip coil	4 n	Q=28/800M 0402
L510	3646059	Chip coil	5 n	Q=28/800M 0402
L553	4551013	Dir.coupl.897.5/1747.5mhz 2.1x1.3		2.1x1.3
L600	3646069	Chip coil	33 n	5 % Q=23/800 MHz
0402				
L631	3646065	Chip coil	12 n	5 % Q=31/800 MHz
0402				
L751	3203705	Ferrite bead 0.015r 42r/100m	0805	0805
L752	3645201	Chip coil	56 n	5 % Q=38/200 MHz
0603				
L800	3648808	Chip coil		10 % Q=50 1206
B100	4510219	Crystal	32.768 k	+−30PPM 9PF
B301	5140157	Buzzer 85db 3000hz 3.0v 8.5x8.5x		8.5x8.5x3
G800	4350223	Vco 3420−3840mhz 2.7v 20ma	9x7	9X7
G830	4510261	VCTCXO	26 M	+−5PPM 2.7V GSM
F101	5119019	SM, fuse f 1.5a 32v	0603	
Z600	4511149	Dual saw filt925−960/1805−1880mhz		
Z620	4511149	Dual saw filt925−960/1805−1880mhz		
Z670	4550201	Dipl+2xsw880−960/1710−1880mhz	7x5	7X5
Z671	4550067	Dipl 880−960/1710−1880mhz	3.2x2.5	3.2x2.5
Z700	4511147	Saw filter	897.5+−17.5 M	/3DB 3X3 3X3
H400	9517046	Rf−can dmd05114 nsm−3		
T600	3640405	Transf balun 900mhz+−100mhz	1210	1210
T630	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T700	3640405	Transf balun 900mhz+−100mhz	1210	1210
T740	3640421	Transf balun 1.8ghz+−100mhz	1206	1206
T800	3640423	Transf balun 3.7ghz+−300mhz	0805	0805
V100	1825023	Chip varistor vwm9v vc20v	0805	0805
V101	4210052	Transistor	DTC114EE	nnp RB V EM3
V104	4113671	Tvs esda6v1w5 ** no new design **		**
V116	4110067	Schottky diode	MBR0520L	20 V 0.5 A SOD123

V250	4210100	Transistor	BC848W	npn 30 V SOT323
V251	4210100	Transistor	BC848W	npn 30 V SOT323
V252	4210052	Transistor	DTC114EE	npn RB V EM3
V320	4860005	Led	Green	0603
V321	4860005	Led	Green	0603
V322	4860005	Led	Green	0603
V323	4860005	Led	Green	0603
V324	4860005	Led	Green	0603
V325	4860005	Led	Green	0603
V331	4864389	Led		0603
V332	4864389	Led		0603
V333	4864389	Led		0603
V334	4864389	Led		0603
V335	4864389	Led		0603
V336	4864389	Led		0603
V350	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V360	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V730	4110014	Schottky diode	BAS70-07	NE W DESIGN**
V800	4210100	Transistor	BC848W	npn 30 V SOT323
V801	4210183	Transistor	BFP193W	npn 8G V SOT343
V903	4210015	Transistor	BFP405	npn 4. V SOT343
V904	4210074	Transistor	BFP420	npn 4. V SOT343
V905	4210100	Transistor	BC848W	npn 30 V SOT323
V907	4210100	Transistor	BC848W	npn 30 V SOT323
D200	4370593	Mad2wd1 v9/11 f731635a/b ubga144		UBGA144
D210	4340747	Combomemory 16m flash+2m sram csp		CSP
N100	4370719	Ccont 2m wfd163mg64t/8 lfbga8x8		
N101	4370621	Chaps v2.0 u423v20g36t lbga6x6		
N220	4340413	IC, regulator	TK11230BMC	3.0 V SOT23L
N250	4370643	Cobba_gjp v4.1 v257bg64t/8 bga64		BGA64
N310	4370433	Uiswitch sttm23av20t tssop20		TSSOP20
N400	4860081	Irda qsd1-m134#021 115.2kbps 2v7		2V7
N401	4340335	IC, regulator	TK11228AM	SSO6
N505	4370731	Hagar 4 sttza8ig80t lfbga80		LFBGA80
N600	4340719	IC, regulator	TK11247BMC	4.7 V SOT23L
N702	4350203	IC, pow.amp.		3.5 V 3.5V
S330	5209001	SM, sw tact spst 12v 50ma side k		KEY
M300	9854352	PC board	UX7V	4.5x4.5x1.6 d 140/pa

Parts list of RM7L (EDMS Issue 12.5) Layout 19 Code: 0201386

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chipres 0w06 680k j		
R101	1430145	Chipres 0w06 100k f		200P
R102	1430796	Chipres 0w06 47k j		
R103	1430803	Chipres 0w06 4k7 f		200PP
R104	1430796	Chipres 0w06 47k j		
R109	1620017	Res network 0w06		2x100r
R110	1430826	Chipres 0w06 680k j		
R111	1430820	Chipres 0w06 470k j		
R118	1430778	Chipres 0w06 10k j		
R120	1620025	Res network 0w06		2x100k
R122	1620019	Res network 0w06		2x10k J
R124	1430726	Chipres 0w06 100r j		
R125	1430726	Chipres 0w06 100r j		
R128	1430718	Chipres 0w06 47r j		
R131	1419003	Chipres 0w5 0r22 j		200PP
R154	1430325	Chipres 0w06 2m2 j		
R201	1430812	Chipres 0w06 220k j		
R202	1430145	Chipres 0w06 100k f		200P
R203	1430803	Chipres 0w06 4k7 f		200PP
R205	1430702	Chipres 0w06 12r j		
R206	1430702	Chipres 0w06 12r j		
R211	1430778	Chipres 0w06 10k j		
R215	1430796	Chipres 0w06 47k j		
R216	1430796	Chipres 0w06 47k j		
R252	1430754	Chipres 0w06 1k0 j		
R256	1430718	Chipres 0w06 47r j		
R257	1430718	Chipres 0w06 47r j		
R258	1430744	Chipres 0w06 470r j		
R260	1430726	Chipres 0w06 100r j		
R261	1430744	Chipres 0w06 470r j		
R265	1430145	Chipres 0w06 100k f		200P
R266	1430806	Chipres 0w06 120k j		
R267	1430762	Chipres 0w06 2k2 j		
R268	1430744	Chipres 0w06 470r j		
R269	1620025	Res network 0w06		2x100k
R270	1430792	Chipres 0w06 33k j		
R271	1430145	Chipres 0w06 100k f		200P
R272	1430145	Chipres 0w06 100k f		200P
R273	1430792	Chipres 0w06 33k j		
R274	1430812	Chipres 0w06 220k j		
R275	1430762	Chipres 0w06 2k2 j		
R276	1430762	Chipres 0w06 2k2 j		
R277	1430145	Chipres 0w06 100k f		200P
R281	1620017	Res network 0w06		2x100r
R285	1825021	Chip varistor vwm14v		VC4

R286	1825021	Chip varistor vwm14v	VC4
R287	1825021	Chip varistor vwm14v	VC4
R310	1430780	Chipres 0w06 12k j	
R311	1430778	Chipres 0w06 10k j	
R350	1430389	Chipres 0w1 18r j	
R351	1430389	Chipres 0w1 18r j	
R352	1430389	Chipres 0w1 18r j	
R353	1430389	Chipres 0w1 18r j	
R371	1430754	Chipres 0w06 1k0 j	
R372	1430754	Chipres 0w06 1k0 j	
R373	1430754	Chipres 0w06 1k0 j	
R374	1430754	Chipres 0w06 1k0 j	
R403	1430702	Chipres 0w06 12r j	
R404	1430702	Chipres 0w06 12r j	
R510	1620003	Res network 0w03	4x100r
R530	1620019	Res network 0w06	1x10kJ
R532	1430846	Chipres 0w06 2k7 f	
R533	1430778	Chipres 0w06 10k j	
R541	1620033	Res network 0w06	2x5k6 J
R546	1620033	Res network 0w06	2x5k6 J
R563	1430187	Chipres 0w06 47k f	200PP
R564	1430746	Chipres 0w06 560r j	
R565	1430803	Chipres 0w06 4k7 f	200PP
R610	1430726	Chipres 0w06 100r j	
R611	1430846	Chipres 0w06 2k7 f	
R613	1430764	Chipres 0w06 3k3 j	
R614	1620017	Res network 0w06	2x100r
R640	1430732	Chipres 0w06 180r j	
R643	1430764	Chipres 0w06 3k3 j	
R645	1430846	Chipres 0w06 2k7 f	
R670	1430730	Chipres 0w06 150r j	
R671	1430730	Chipres 0w06 150r j	
R700	1430726	Chipres 0w06 100r j	
R704	1430726	Chipres 0w06 100r j	
R710	1430702	Chipres 0w06 12r j	
R711	1430734	Chipres 0w06 220r j	
R712	1430702	Chipres 0w06 12r j	
R723	1620505	Res network 0w04	2DB ATATT
R730	1430762	Chipres 0w06 2k2 j	
R731	1430740	Chipres 0w06 330r j	
R732	1430746	Chipres 0w06 560r j	
R740	1430726	Chipres 0w06 100r j	
R741	1430726	Chipres 0w06 100r j	
R742	1430726	Chipres 0w06 100r j	
R744	1430726	Chipres 0w06 100r j	
R751	1430734	Chipres 0w06 220r j	
R754	1430718	Chipres 0w06 47r j	
R755	1430714	Chipres 0w06 33r j	
R756	1430754	Chipres 0w06 1k0 j	

R757	1430754	Chipres 0w06 1k0 j	
R758	1430710	Chipres 0w06 22r j	
R763	1430740	Chipres 0w06 330r j	
R764	1430762	Chipres 0w06 2k2 j	
R781	1430690	Chipres jumper 0r0	
R790	1430803	Chipres 0w06 4k7 f	200PP
R791	1430756	Chipres 0w06 1k2 j	
R792	1430848	Chipres 0w06 12k f	
R800	1430778	Chipres 0w06 10k j	
R801	1430841	Chipres 0w06 6k8 f	
R802	1430770	Chipres 0w06 4k7 j	
R805	1620505	Res network 0w04	2DB ATATT
R807	1430728	Chipres 0w06 120r j	
R829	1430752	Chipres 0w06 820r j	
R830	1430762	Chipres 0w06 2k2 j	
R831	1430718	Chipres 0w06 47r j	
R832	1430788	Chipres 0w06 22k j	
R833	1430762	Chipres 0w06 2k2 j	
R834	1430812	Chipres 0w06 220k j	
C101	2320548	Chipcap np0 33p j 50v	
C102	2320538	Chipcap np0 12p j 50v	
C103	2312411	Chipcap x5r 1u0 m 25v	
C104	2320783	Chipcap x7r 33n k 10v	
C105	2611747	Chiptcap 10u m 10v	2.
C106	2320481	Chipcap x5r 1u k 6v3	
C107	2320481	Chipcap x5r 1u k 6v3	
C108	2312401	Chipcap x5r 1u0 k 10v	
C109	2320544	Chipcap np0 22p j 50v	
C110	2320544	Chipcap np0 22p j 50v	
C113	2320508	Chipcap np0 1p0 c 50v	
C114	2320546	Chipcap np0 27p j 50v	
C116	2312401	Chipcap x5r 1u0 k 10v	
C119	2320481	Chipcap x5r 1u k 6v3	
C120	2320778	Chipcap x7r 10n k 16v	
C121	2320778	Chipcap x7r 10n k 16v	
C127	2320805	Chipcap x5r 100n k 10v	
C128	2312401	Chipcap x5r 1u0 k 10v	
C129	2312401	Chipcap x5r 1u0 k 10v	
C131	2611747	Chiptcap 10u m 10v	2.
C132	2611741	Chiptcap 4u7 m 10v	2.
C133	2320481	Chipcap x5r 1u k 6v3	
C140	2320481	Chipcap x5r 1u k 6v3	
C142	2611747	Chiptcap 10u m 10v	2.
C150	2320481	Chipcap x5r 1u k 6v3	
C151	2320481	Chipcap x5r 1u k 6v3	
C152	2320481	Chipcap x5r 1u k 6v3	
C153	2320481	Chipcap x5r 1u k 6v3	
C154	2320481	Chipcap x5r 1u k 6v3	
C160	2320546	Chipcap np0 27p j 50v	

C161	2320546	Chipcap np0 27p j 50v	
C162	2320524	Chipcap np0 3p3 c 50v	
C163	2320602	Chipcap np0 4p7 c 50v	
C164	2320530	Chipcap np0 5p6 c 50v	
C165	2611737	Chiptcap 68u m 16v	7.
C168	2320534	Chipcap np0 8p2 c 50v	
C201	2320783	Chipcap x7r 33n k 10v	
C203	2320778	Chipcap x7r 10n k 16v	
C204	2320778	Chipcap x7r 10n k 16v	
C205	2610203	Chiptcap 2u2 m 10v	2.
C206	2320778	Chipcap x7r 10n k 16v	
C207	2320778	Chipcap x7r 10n k 16v	
C208	2320778	Chipcap x7r 10n k 16v	
C209	2320778	Chipcap x7r 10n k 16v	
C211	2320783	Chipcap x7r 33n k 10v	
C212	2320779	Chipcap x7r 100n k 16v	
C213	2320744	Chipcap x7r 1n0 k 50v	
C217	2320778	Chipcap x7r 10n k 16v	
C218	2320546	Chipcap np0 27p j 50v	
C220	2320778	Chipcap x7r 10n k 16v	
C247	2320778	Chipcap x7r 10n k 16v	
C248	2320481	Chipcap x5r 1u k 6v3	
C251	2320783	Chipcap x7r 33n k 10v	
C253	2320783	Chipcap x7r 33n k 10v	
C255	2320744	Chipcap x7r 1n0 k 50v	
C257	2320783	Chipcap x7r 33n k 10v	
C258	2320783	Chipcap x7r 33n k 10v	
C259	2320783	Chipcap x7r 33n k 10v	
C261	2320744	Chipcap x7r 1n0 k 50v	
C262	2320783	Chipcap x7r 33n k 10v	
C263	2320783	Chipcap x7r 33n k 10v	
C264	2320544	Chipcap np0 22p j 50v	
C268	2320481	Chipcap x5r 1u k 6v3	
C270	2610207	Chiptcap 10u m 6v3 .	2.
C274	2320544	Chipcap np0 22p j 50v	
C276	2320481	Chipcap x5r 1u k 6v3	
C278	2320544	Chipcap np0 22p j 50v	
C283	2320744	Chipcap x7r 1n0 k 50v	
C284	2320744	Chipcap x7r 1n0 k 50v	
C285	2320598	Chipcap x7r 3n9 j 50v	
C286	2320598	Chipcap x7r 3n9 j 50v	
C287	2320744	Chipcap x7r 1n0 k 50v	
C291	2320546	Chipcap np0 27p j 50v	
C292	2320546	Chipcap np0 27p j 50v	
C293	2320544	Chipcap np0 22p j 50v	
C294	2320744	Chipcap x7r 1n0 k 50v	
C295	2320744	Chipcap x7r 1n0 k 50v	
C296	2610207	Chiptcap 10u m 6v3	2.
C297	2610207	Chiptcap 10u m 6v3	2.

C310	2312401	Chipcap x5r 1u0 k 10v
C330	2320481	Chipcap x5r 1u k 6v3
C331	2320779	Chipcap x7r 100n k 16v
C342	2320560	Chipcap np0 100p j 50v
C371	2320564	Chipcap np0 150p j 50v
C372	2320564	Chipcap np0 150p j 50v
C373	2320564	Chipcap np0 150p j 50v
C400	2320481	Chipcap x5r 1u k 6v3
C401	2320805	Chipcap x5r 100n k 10v
C405	2320544	Chipcap np0 22p j 50v
C406	2320805	Chipcap x5r 100n k 10v
C510	2320135	Chipcap x7r 150n k 10v
C511	2320135	Chipcap x7r 150n k 10v
C512	2320135	Chipcap x7r 150n k 10v
C513	2320135	Chipcap x7r 150n k 10v
C520	2320485	Chipcap np0 470p j 50v
C521	2320485	Chipcap np0 470p j 50v
C522	2320485	Chipcap np0 470p j 50v
C523	2320485	Chipcap np0 470p j 50v
C530	2320631	Chipcap np0 180p j 25v
C531	2320631	Chipcap np0 180p j 25v
C532	2320781	Chipcap x7r 47n m 16v
C533	2320781	Chipcap x7r 47n m 16v
C534	2320783	Chipcap x7r 33n k 10v
C535	2320546	Chipcap np0 27p j 50v
C540	2320552	Chipcap np0 47p j 50v
C541	2320552	Chipcap np0 47p j 50v
C550	2320598	Chipcap x7r 3n9 j 50v
C557	2320554	Chipcap np0 56p j 50v
C560	2320548	Chipcap np0 33p j 50v
C561	2320620	Chipcap x7r 10n j 16v
C562	2320546	Chipcap np0 27p j 50v
C564	2320783	Chipcap x7r 33n k 10v
C600	2320560	Chipcap np0 100p j 50v
C601	2320560	Chipcap np0 100p j 50v
C610	2320602	Chipcap np0 4p7 c 50v
C611	2320584	Chipcap x7r 1n0 j 50v
C612	2320556	Chipcap np0 68p j 50v
C613	2320556	Chipcap np0 68p j 50v
C614	2320556	Chipcap np0 68p j 50v
C615	2320560	Chipcap np0 100p j 50v
C620	2320805	Chipcap x5r 100n k 10v
C621	2320805	Chipcap x5r 100n k 10v
C630	2320530	Chipcap np0 5p6 c 50v
C631	2320530	Chipcap np0 5p6 c 50v
C640	2320516	Chipcap np0 1p5 c 50v
C642	2320584	Chipcap x7r 1n0 j 50v
C643	2320540	Chipcap np0 15p j 50v
C644	2320530	Chipcap np0 5p6 c 50v

C645	2320540	Chipcap np0 15p j 50v	
C700	2320540	Chipcap np0 15p j 50v	
C702	2320602	Chipcap np0 4p7 c 50v	
C703	2320532	Chipcap np0 6p8 c 50v	
C704	2320584	Chipcap x7r 1n0 j 50v	
C714	2320783	Chipcap x7r 33n k 10v	
C720	2320556	Chipcap np0 68p j 50v	
C730	2320546	Chipcap np0 27p j 50v	
C731	2320756	Chipcap x7r 3n3 k 50v	
C733	2320546	Chipcap np0 27p j 50v	
C741	2320540	Chipcap np0 15p j 50v	
C743	2320538	Chipcap np0 12p j 50v	
C746	2320548	Chipcap np0 33p j 50v	
C747	2320540	Chipcap np0 15p j 50v	
C754	2320620	Chipcap x7r 10n j 16v	
C755	2320481	Chipcap x5r 1u k 6v3	
C757	2320514	Chipcap np0 1p2 c 50v	
C758	2320584	Chipcap x7r 1n0 j 50v	
C759	2320546	Chipcap np0 27p j 50v	
C760	2320526	Chipcap np0 3p9 c 50v	
C761	2320536	Chipcap np0 10p j 50v	
C762	2320536	Chipcap np0 10p j 50v	
C782	2320524	Chipcap np0 3p3 c 50v	
C783	2312401	Chipcap x5r 1u0 k 10v	
C785	2320805	Chipcap x5r 100n k 10v	
C788	2320621	Chipcap np0 0p5 c 50v	
C789	2320518	Chipcap np0 1p8 c 50v	
C790	2320518	Chipcap np0 1p8 c 50v	
C792	2320560	Chipcap np0 100p j 50v	
C793	2320540	Chipcap np0 15p j 50v	
C799	2320534	Chipcap np0 8p2 c 50v	
C801	2320564	Chipcap np0 150p j 50v	
C802	2312221	Chipcap np0 4n7 j 25v	Q4
C803	2320576	Chipcap x7r 470p j 50v	
C804	2320518	Chipcap np0 1p8 c 50v	
C805	2610203	Chiptcap 2u2 m 10v	2.
C829	2320560	Chipcap np0 100p j 50v	
C830	2320560	Chipcap np0 100p j 50v	
C831	2310793	Chipcap x5r 2u2 k 10v	
C832	2320620	Chipcap x7r 10n j 16v	
C833	2320584	Chipcap x7r 1n0 j 50v	
C834	2320584	Chipcap x7r 1n0 j 50v	
C835	2320540	Chipcap np0 15p j 50v	
C836	2320544	Chipcap np0 22p j 50v	
C837	2320526	Chipcap np0 3p9 c 50v	
C860	2320548	Chipcap np0 33p j 50v	
C861	2320621	Chipcap np0 0p5 c 50v	
C862	2320520	Chipcap np0 2p2 c 50v	
C863	2320536	Chipcap np0 10p j 50v	

C864	2320524	Chipcap np0 3p3 c 50v	
L103	3203705	Ferrite bead 0.015r	42R/
L104	3203705	Ferrite bead 0.015r	42R/
L271	3203709	Ferrite bead 0.5r	120R/1
L272	3203709	Ferrite bead 0.5r	120R/1
L283	3640035	Filt z>450r/100m	0R7MAX
L284	3640035	Filt z>450r/100m	0R7MAX
L287	3203709	Ferrite bead 0.5r	120R/1
L503	3646051	Chip coil 3n9 +−0n3	Q28/
L504	3646063	Chip coil 22n j	Q28/800M
L505	3646051	Chip coil 3n9 +−0n3	Q28/
L506	3646053	Chip coil 4n7 +−0n3	Q28/
L510	3646059	Chip coil 5n6 +−0n3	Q28/
L553	4551013	Dir.coupl.	897.5/1747.5mh
L600	3646069	Chip coil 33n j	Q23/800M
L631	3646065	Chip coil 12n j	Q31/800M
L751	3203705	Ferrite bead 0.015r	42R/
L752	3645201	Chip coil 56nh j	Q38/200
L800	3648808	Chip coil 10u k	q50
B100	4510219	Crystal	32.768KHZ+−30PPM
B301	5140157	Buzzer 85db 3000hz	3.0V
G800	4350223	Vco 3420−3840mhz 2.7v 20	20
G830	4510261	Vctcxo 26mhz+−5ppm 2.7v	2.7V
F101	5119019	Sm fuse f 1.5a 32v 0603	0603
Z600	4511149	Dual saw filt	925−960/180
Z620	4511149	Dual saw filt	925−960/180
Z670	4550201	Dipl+2xsw	880−960/1710−18
Z671	4550067	Dipl 880−960/1710−1880mh	
Z700	4511147	Saw filt 897.5+−17.5mhz/	897.5+−17.5MHZ/
H400	9517046	Rf−can	dmd05114 nsm−3
T600	3640405	Transf balun	900MHZ+−10
T630	3640421	Transf balun	1.8GHZ+−10
T700	3640405	Transf balun	900MHZ+−10
T740	3640421	Transf balun	1.8GHZ+−10
T800	3640423	Transf balun	3.7GHZ+−30
V100	1825023	Chip varistor vwm9v	VC20
V101	4210052	Tr dtc114ee ***	D
V104	4113671	Tvs esda6v1w5 **	NEW
V116	4110067	Sch di mbr0520l **	NEW
V250	4210100	Tr bc848w n 30v	0.1A100M
V251	4210100	Tr bc848w n 30v	0.1A100M
V252	4210052	Tr dtc114ee *** no new d	D
V320	4860005	Led cl270yg yelgrn	>5MCD
V321	4860005	Led cl270yg yelgrn	>5MCD
V322	4860005	Led cl270yg yelgrn	>5MCD
V323	4860005	Led cl270yg yelgrn	>5MCD
V324	4860005	Led cl270yg yelgrn	>5MCD
V325	4860005	Led cl270yg yelgrn	>5MCD
V331	4864389	Led cl191yg 10−35mcd	H=0

V332	4864389	Led cl191yg 10-35mcd	H=0
V333	4864389	Led cl191yg 10-35mcd	H=0
V334	4864389	Led cl191yg 10-35mcd	H=0
V335	4864389	Led cl191yg 10-35mcd	H=0
V336	4864389	Led cl191yg 10-35mcd	H=0
V350	4110089	Dix2 bav70w cc 70v .5a	4
V360	4110089	Dix2 bav70w cc 70v .5a	4
V730	4110014	Sch di bas70-07 **	NEW
V800	4210100	Tr bc848w n 30v	0.1A100M
V801	4210183	Tr bfp193w n 8ghz	F1.3-2
V903	4210015	Tr bfp405 n 4.5v12ma	20G
V904	4210074	Tr bfp420 n 4.5v35ma	20G
V905	4210100	Tr bc848w n 30v	0.1A100M
V907	4210100	Tr bc848w n 30v	0.1A100M
D200	4370687	mad2wd1 v16 rom6	F741541
D210	4340747	Combomemory 16m	FLASH+2M
N100	4370719	Ccont 2m	wfd163mg64t/8 l
N101	4370621	Chaps v2.0	u423v20g36t
N220	4340413	Tk11230bmc volt reg	3.0V
N250	4370643	Cobba_gjp v4.1	V257BG64T
N310	4370433	uiswitch sttm23av20t	
N400	4860081	irda rpm871-l1e2	115KBPS
N401	4340335	Tk11228am	REG2.8V+-80MV1
N505	4370731	hagar 4	sttza8ig80t
N600	4340719	Tk11247bmc volt reg	4.7V
N702	4350203	pw amp	880-915/1710-1785
S330	5209001	Sm sw tact spst 12v	50MA
M300	9854352	pcb ux7v 4.5x4.5x1.6 d 1	1
	9854413	PCB RM7L 94.8X40X1 M8 4/	

Parts list of RM7L (EDMS Issue 13.5) Layout 21 Code: 0201386

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chipres 0w06 680k j		
R101	1430145	Chipres 0w06 100k f 200p		200P
R102	1430796	Chipres 0w06 47k j		
R103	1430803	Chipres 0w06 4k7 f 200pp		200PP
R104	1430796	Chipres 0w06 47k j		
R109	1620017	Res network 0w06 2x100r		2x100r
R110	1430826	Chipres 0w06 680k j		
R111	1430820	Chipres 0w06 470k j		
R118	1430778	Chipres 0w06 10k j		
R120	1620025	Res network 0w06 2x100k		2x100k
R122	1620019	Res network 0w06 2x10k j		J
R124	1430726	Chipres 0w06 100r j		
R125	1430726	Chipres 0w06 100r j		
R128	1430718	Chipres 0w06 47r j		
R131	1419003	Chipres 0w5 0r22 j 200pp		200PP
R154	1430325	Chipres 0w06 2m2 j		
R201	1430812	Chipres 0w06 220k j		
R202	1430145	Chipres 0w06 100k f 200p		200P
R203	1430803	Chipres 0w06 4k7 f 200pp		200PP
R211	1430778	Chipres 0w06 10k j		
R215	1430796	Chipres 0w06 47k j		
R216	1430796	Chipres 0w06 47k j		
R252	1430754	Chipres 0w06 1k0 j		
R256	1430718	Chipres 0w06 47r j		
R257	1430718	Chipres 0w06 47r j		
R258	1430744	Chipres 0w06 470r j		
R260	1430726	Chipres 0w06 100r j		
R261	1430744	Chipres 0w06 470r j		
R265	1430145	Chipres 0w06 100k f 200p		200P
R266	1430806	Chipres 0w06 120k j		
R267	1430762	Chipres 0w06 2k2 j		
R268	1430744	Chipres 0w06 470r j		
R269	1620025	Res network 0w06 2x100k		2x100k
R270	1430792	Chipres 0w06 33k j		
R271	1430145	Chipres 0w06 100k f 200p		200P
R272	1430145	Chipres 0w06 100k f 200p		200P
R273	1430792	Chipres 0w06 33k j		
R274	1430812	Chipres 0w06 220k j		
R275	1430762	Chipres 0w06 2k2 j		
R276	1430762	Chipres 0w06 2k2 j		
R277	1430145	Chipres 0w06 100k f 200p		200P
R281	1620017	Res network 0w06 2x100r		2x100r
R285	1825021	Chip varistor vwm14v vc4		VC4
R286	1825021	Chip varistor vwm14v vc4		VC4
R287	1825021	Chip varistor vwm14v vc4		VC4

R310	1430780	Chipres 0w06 12k j	
R311	1430778	Chipres 0w06 10k j	
R350	1430389	Chipres 0w1 18r j	
R351	1430389	Chipres 0w1 18r j	
R352	1430389	Chipres 0w1 18r j	
R353	1430389	Chipres 0w1 18r j	
R371	1430754	Chipres 0w06 1k0 j	
R372	1430754	Chipres 0w06 1k0 j	
R373	1430754	Chipres 0w06 1k0 j	
R374	1430754	Chipres 0w06 1k0 j	
R403	1430702	Chipres 0w06 12r j	
R404	1430702	Chipres 0w06 12r j	
R510	1620003	Res network 0w03 4x100r	4x100r
R530	1620019	Res network 0w06 2x10k j	J
R532	1430846	Chipres 0w06 2k7 f	
R533	1430778	Chipres 0w06 10k j	
R541	1620033	Res network 0w06 2x5k6 j	J
R546	1620033	Res network 0w06 2x5k6 j	J
R563	1430187	Chipres 0w06 47k f 200pp	200PP
R564	1430746	Chipres 0w06 560r j	
R565	1430803	Chipres 0w06 4k7 f 200pp	200PP
R610	1430726	Chipres 0w06 100r j	
R611	1430846	Chipres 0w06 2k7 f	
R613	1430764	Chipres 0w06 3k3 j	
R614	1620017	Res network 0w06 2x100r	2x100r
R640	1430732	Chipres 0w06 180r j	
R643	1430764	Chipres 0w06 3k3 j	
R645	1430846	Chipres 0w06 2k7 f	
R670	1430730	Chipres 0w06 150r j	
R671	1430730	Chipres 0w06 150r j	
R700	1430726	Chipres 0w06 100r j	
R704	1430726	Chipres 0w06 100r j	
R710	1430702	Chipres 0w06 12r j	
R711	1430734	Chipres 0w06 220r j	
R712	1430702	Chipres 0w06 12r j	
R723	1620505	Res network 0w04	2DB ATATT
R730	1430762	Chipres 0w06 2k2 j	
R731	1430740	Chipres 0w06 330r j	
R732	1430746	Chipres 0w06 560r j	
R740	1430726	Chipres 0w06 100r j	
R741	1430726	Chipres 0w06 100r j	
R742	1430726	Chipres 0w06 100r j	
R744	1430726	Chipres 0w06 100r j	
R751	1430734	Chipres 0w06 220r j	
R754	1430718	Chipres 0w06 47r j	
R755	1430714	Chipres 0w06 33r j	
R756	1430754	Chipres 0w06 1k0 j	
R757	1430754	Chipres 0w06 1k0 j	
R758	1430710	Chipres 0w06 22r j	

R763	1430740	Chipres 0w06 330r j	
R764	1430762	Chipres 0w06 2k2 j	
R790	1430803	Chipres 0w06 4k7 f 200pp	200PP
R791	1430756	Chipres 0w06 1k2 j	
R792	1430848	Chipres 0w06 12k f	
R800	1430778	Chipres 0w06 10k j	
R801	1430841	Chipres 0w06 6k8 f	
R802	1430770	Chipres 0w06 4k7 j	
R805	1620505	Res network 0w04	2DB ATATT
R807	1430728	Chipres 0w06 120r j	
R829	1430752	Chipres 0w06 820r j	
R830	1430762	Chipres 0w06 2k2 j	
R831	1430718	Chipres 0w06 47r j	
R832	1430788	Chipres 0w06 22k j	
R833	1430762	Chipres 0w06 2k2 j	
R834	1430812	Chipres 0w06 220k j	
C101	2320548	Chipcap np0 33p j 50v	
C102	2320538	Chipcap np0 12p j 50v	
C103	2312411	Chipcap x5r 1u0 m 25v	
C104	2320783	Chipcap x7r 33n k 10v	
C105	2611747	Chiptcap 10u m 10v 2.	2.
C106	2320481	Chipcap x5r 1u k 6v3	
C107	2320481	Chipcap x5r 1u k 6v3	
C108	2312401	Chipcap x5r 1u0 k 10v	
C109	2320544	Chipcap np0 22p j 50v	
C110	2320544	Chipcap np0 22p j 50v	
C113	2320508	Chipcap np0 1p0 c 50v	
C114	2320546	Chipcap np0 27p j 50v	
C116	2312401	Chipcap x5r 1u0 k 10v	
C119	2320481	Chipcap x5r 1u k 6v3	
C120	2320778	Chipcap x7r 10n k 16v	
C121	2320778	Chipcap x7r 10n k 16v	
C127	2320805	Chipcap x5r 100n k 10v	
C128	2312401	Chipcap x5r 1u0 k 10v	
C129	2312401	Chipcap x5r 1u0 k 10v	
C131	2611747	Chiptcap 10u m 10v 2.	2.
C132	2611741	Chiptcap 4u7 m 10v 2.	2.
C133	2320481	Chipcap x5r 1u k 6v3	
C140	2320481	Chipcap x5r 1u k 6v3	
C142	2611747	Chiptcap 10u m 10v 2.	2.
C150	2320481	Chipcap x5r 1u k 6v3	
C151	2320481	Chipcap x5r 1u k 6v3	
C152	2320481	Chipcap x5r 1u k 6v3	
C153	2320481	Chipcap x5r 1u k 6v3	
C154	2320481	Chipcap x5r 1u k 6v3	
C160	2320546	Chipcap np0 27p j 50v	
C161	2320546	Chipcap np0 27p j 50v	
C162	2320524	Chipcap np0 3p3 c 50v	
C163	2320602	Chipcap np0 4p7 c 50v	

C164	2320530	Chipcap np0 5p6 c 50v	
C165	2611737	Chiptcap 68u m 16v	7.
C168	2320534	Chipcap np0 8p2 c 50v	
C201	2320783	Chipcap x7r 33n k 10v	
C203	2320778	Chipcap x7r 10n k 16v	
C204	2320778	Chipcap x7r 10n k 16v	
C205	2610203	Chiptcap 2u2 m 10v	2.
C206	2320778	Chipcap x7r 10n k 16v	
C207	2320778	Chipcap x7r 10n k 16v	
C208	2320778	Chipcap x7r 10n k 16v	
C209	2320778	Chipcap x7r 10n k 16v	
C211	2320783	Chipcap x7r 33n k 10v	
C212	2320779	Chipcap x7r 100n k 16v	
C213	2320744	Chipcap x7r 1n0 k 50v	
C217	2320778	Chipcap x7r 10n k 16v	
C218	2320546	Chipcap np0 27p j 50v	
C220	2320778	Chipcap x7r 10n k 16v	
C247	2320778	Chipcap x7r 10n k 16v	
C248	2320481	Chipcap x5r 1u k 6v3	
C251	2320783	Chipcap x7r 33n k 10v	
C253	2320783	Chipcap x7r 33n k 10v	
C255	2320744	Chipcap x7r 1n0 k 50v	
C257	2320783	Chipcap x7r 33n k 10v	
C258	2320783	Chipcap x7r 33n k 10v	
C259	2320783	Chipcap x7r 33n k 10v	
C261	2320744	Chipcap x7r 1n0 k 50v	
C262	2320783	Chipcap x7r 33n k 10v	
C263	2320783	Chipcap x7r 33n k 10v	
C264	2320544	Chipcap np0 22p j 50v	
C268	2320481	Chipcap x5r 1u k 6v3	
C270	2610207	Chiptcap 10u m 6v3	2.
C274	2320544	Chipcap np0 22p j 50v	
C276	2320481	Chipcap x5r 1u k 6v3	
C278	2320544	Chipcap np0 22p j 50v	
C283	2320744	Chipcap x7r 1n0 k 50v	
C284	2320744	Chipcap x7r 1n0 k 50v	
C285	2320598	Chipcap x7r 3n9 j 50v	
C286	2320598	Chipcap x7r 3n9 j 50v	
C287	2320744	Chipcap x7r 1n0 k 50v	
C291	2320546	Chipcap np0 27p j 50v	
C292	2320546	Chipcap np0 27p j 50v	
C293	2320544	Chipcap np0 22p j 50v	
C294	2320744	Chipcap x7r 1n0 k 50v	
C295	2320744	Chipcap x7r 1n0 k 50v	
C296	2610207	Chiptcap 10u m 6v3	2.
C297	2610207	Chiptcap 10u m 6v3	2.
C310	2312401	Chipcap x5r 1u0 k 10v	
C330	2320481	Chipcap x5r 1u k 6v3	
C331	2320779	Chipcap x7r 100n k 16v	

C342	2320560	Chipcap np0 100p j 50v
C371	2320564	Chipcap np0 150p j 50v
C372	2320564	Chipcap np0 150p j 50v
C373	2320564	Chipcap np0 150p j 50v
C400	2320481	Chipcap x5r 1u k 6v3
C401	2320805	Chipcap x5r 100n k 10v
C405	2320544	Chipcap np0 22p j 50v
C406	2320805	Chipcap x5r 100n k 10v
C510	2320135	Chipcap x7r 150n k 10v
C511	2320135	Chipcap x7r 150n k 10v
C512	2320135	Chipcap x7r 150n k 10v
C513	2320135	Chipcap x7r 150n k 10v
C520	2320485	Chipcap np0 470p j 50v
C521	2320485	Chipcap np0 470p j 50v
C522	2320485	Chipcap np0 470p j 50v
C523	2320485	Chipcap np0 470p j 50v
C530	2320631	Chipcap np0 180p j 25v
C531	2320631	Chipcap np0 180p j 25v
C532	2320781	Chipcap x7r 47n m 16v
C533	2320781	Chipcap x7r 47n m 16v
C534	2320783	Chipcap x7r 33n k 10v
C535	2320546	Chipcap np0 27p j 50v
C540	2320552	Chipcap np0 47p j 50v
C541	2320552	Chipcap np0 47p j 50v
C550	2320598	Chipcap x7r 3n9 j 50v
C557	2320554	Chipcap np0 56p j 50v
C560	2320548	Chipcap np0 33p j 50v
C561	2320620	Chipcap x7r 10n j 16v
C562	2320546	Chipcap np0 27p j 50v
C564	2320783	Chipcap x7r 33n k 10v
C600	2320560	Chipcap np0 100p j 50v
C601	2320560	Chipcap np0 100p j 50v
C610	2320602	Chipcap np0 4p7 c 50v
C611	2320584	Chipcap x7r 1n0 j 50v
C612	2320556	Chipcap np0 68p j 50v
C613	2320556	Chipcap np0 68p j 50v
C614	2320556	Chipcap np0 68p j 50v
C615	2320560	Chipcap np0 100p j 50v
C620	2320805	Chipcap x5r 100n k 10v
C621	2320805	Chipcap x5r 100n k 10v
C630	2320530	Chipcap np0 5p6 c 50v
C631	2320530	Chipcap np0 5p6 c 50v
C640	2320516	Chipcap np0 1p5 c 50v
C642	2320584	Chipcap x7r 1n0 j 50v
C643	2320540	Chipcap np0 15p j 50v
C644	2320530	Chipcap np0 5p6 c 50v
C645	2320540	Chipcap np0 15p j 50v
C700	2320540	Chipcap np0 15p j 50v
C702	2320602	Chipcap np0 4p7 c 50v

C703	2320532	Chipcap np0 6p8 c 50v	
C704	2320584	Chipcap x7r 1n0 j 50v	
C714	2320783	Chipcap x7r 33n k 10v	
C720	2320556	Chipcap np0 68p j 50v	
C730	2320546	Chipcap np0 27p j 50v	
C731	2320756	Chipcap x7r 3n3 k 50v	
C733	2320546	Chipcap np0 27p j 50v	
C741	2320540	Chipcap np0 15p j 50v	
C743	2320538	Chipcap np0 12p j 50v	
C746	2320548	Chipcap np0 33p j 50v	
C747	2320540	Chipcap np0 15p j 50v	
C754	2320620	Chipcap x7r 10n j 16v	
C755	2320481	Chipcap x5r 1u k 6v3	
C757	2320514	Chipcap np0 1p2 c 50v	
C758	2320584	Chipcap x7r 1n0 j 50v	
C759	2320546	Chipcap np0 27p j 50v	
C760	2320526	Chipcap np0 3p9 c 50v	
C761	2320536	Chipcap np0 10p j 50v	
C762	2320536	Chipcap np0 10p j 50v	
C782	2320524	Chipcap np0 3p3 c 50v	
C783	2312401	Chipcap x5r 1u0 k 10v	
C785	2320805	Chipcap x5r 100n k 10v	
C789	2320518	Chipcap np0 1p8 c 50v	
C790	2320518	Chipcap np0 1p8 c 50v	
C792	2320560	Chipcap np0 100p j 50v	
C793	2320540	Chipcap np0 15p j 50v	
C799	2320534	Chipcap np0 8p2 c 50v	
C801	2320564	Chipcap np0 150p j 50v	
C802	2312221	Chipcap np0 4n7 j 25v q4	Q4
C803	2320576	Chipcap x7r 470p j 50v	
C804	2320518	Chipcap np0 1p8 c 50v	
C805	2610203	Chiptcap 2u2 m 10v 2.	2.
C829	2320560	Chipcap np0 100p j 50v	
C830	2320560	Chipcap np0 100p j 50v	
C831	2310793	Chipcap x5r 2u2 k 10v	
C832	2320620	Chipcap x7r 10n j 16v	
C833	2320584	Chipcap x7r 1n0 j 50v	
C834	2320584	Chipcap x7r 1n0 j 50v	
C835	2320540	Chipcap np0 15p j 50v	
C836	2320544	Chipcap np0 22p j 50v	
C837	2320526	Chipcap np0 3p9 c 50v	
C860	2320548	Chipcap np0 33p j 50v	
C861	2320621	Chipcap np0 0p5 c 50v	
C862	2320520	Chipcap np0 2p2 c 50v	
C863	2320536	Chipcap np0 10p j 50v	
C864	2320524	Chipcap np0 3p3 c 50v	
L103	3203705	Ferrite bead 0.015r 42r/	42R/
L104	3203705	Ferrite bead 0.015r 42r/	42R/
L271	3203709	Ferrite bead 0.5r 120r/1	120R/1

L272	3203709	Ferrite bead 0.5r 120r/1	120R/1
L283	3640035	Filt z+AD4-450r/100m 0r7max	0R7MAX
L284	3640035	Filt z+AD4-450r/100m 0r7max	0R7MAX
L287	3203709	Ferrite bead 0.5r 120r/1	120R/1
L503	3646051	Chip coil 3n9 +-0n3 q28/	Q28/
L504	3646063	Chip coil 22n j q28/800m	Q28/800M
L505	3646051	Chip coil 3n9 +-0n3 q28/	Q28/
L506	3646053	Chip coil 4n7 +-0n3 q28/	Q28/
L510	3646059	Chip coil 5n6 +-0n3 q28/	Q28/
L553	4551013	Dir.coupl.897.5/1747.5mh	
L600	3646069	Chip coil 33n j q23/800m	Q23/800M
L631	3646065	Chip coil 12n j q31/800m	Q31/800M
L751	3203705	Ferrite bead 0.015r 42r/	42R/
L752	3645201	Chip coil 56nh j q38/200	Q38/200
L800	3645073	Chip coil 10u k 0.015a 1	1
B100	4510219	Crystal 32.768khz+-30ppm	
B301	5140157	Buzzer 85db 3000hz 3.0v	3.0V
G800	4350273	Vco 3420-3840mhz 2.7v 20	20
G830	4510261	Vctcxo 26mhz+-5ppm 2.7v	2.7V
F101	5119019	sm fuse f 1.5a 32v 0603	0603
Z600	4511149	Dual saw filt 925-960/180	FILT925-960/180
Z620	4511149	Dual saw filt 925-960/180	FILT925-960/180
Z670	4550201	Dipl+2xsw8w-960/1710-18	
Z671	4550067	Dipl 880-960/1710-1880mh	
Z700	4511147	saw filt 897.5+-17.5mhz/	897.5+-17.5MHZ/
H400	9517046	Rf-can dmd05114 nsm-3	
T600	3640405	Transf balun 900mhz10	900MHZ10
T630	3640421	Transf balun 1.8ghz10	1.8GHZ10
T700	3640405	Transf balun 900mhz10	900MHZ10
T740	3640421	Transf balun 1.8ghz10	1.8GHZ10
T800	3640423	Transf balun 3.7ghz30	3.7GHZ30
V100	1825023	Chip varistor vwm9v vc20	VC20
V101	4210049	Tr pdtc114ee n50v rb+AD0-rbe	RB+AD0-RBE
V104	4113671	Tvs esda6v1w5 +ACoAKg- no new	NEW
V116	4110067	Sch di mbr0520l +ACoAKg-no new	NEW
V250	4210100	Tr bc848w n 30v 0.1a100m	0.1A100M
V251	4210100	Tr bc848w n 30v 0.1a100m	0.1A100M
V252	4210049	Tr pdtc114ee n50v rb+AD0-rbe	RB+AD0-RBE
V320	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V321	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V322	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V323	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V324	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V325	4860005	Led cl270yg yelgrn +AD4-5mcd	+AD4-5MCD
V331	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0
V332	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0
V333	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0
V334	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0
V335	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0

V336	4864389	Led cl191yg 10-35mcd h+AD0-0	H+AD0-0
V350	4110089	Dix2 bav70w cc 70v .5a 4	4
V360	4110089	Dix2 bav70w cc 70v .5a 4	4
V730	4110014	Sch di bas70-07 +ACoAKg	
V800	4210100	Tr bc848w n 30v	0.1A100M
V801	4210183	Tr bfp193w n 8ghz	F1.3-2
V903	4210015	Tr bfp405 n 4.5v12ma	20G
V904	4210074	Tr bfp420 n 4.5v35ma	20G
V905	4210100	Tr bc848w n 30v	0.1A100M
V907	4210100	Tr bc848w n 30v	0.1A100M
D200	4370687	mad2wd1 v16 rom6	F741541
D210	4340747	Combomemory 16m	FLASH
N100	4370719	Ccont 2m	wfd163mg64t/8 l
N101	4370807	Chaps v3.1 tu01balt	
N220	4340413	Tk11230bmc volt reg	3.0V
N250	4370793	Cobba+AF8-gjp v4.1	V257JG64T
N310	4370433	UI switch	sttm23av20t
N400	4860081	irda rpm871-l1e2 115kbps	115KBPS
N401	4340335	Tk11228am	REG2.8V+-80MV1
N505	4370781	hagar 5 tzc6begt	
N600	4340719	Tk11247bmc volt reg 4.7v	4.7V
N702	4350203	pw amp 880-915/1710-1785	
S330	5209001	sm sw tact spst 12v 50ma	50MA
	9854413	PCB RM7L 94.8X40X1	M8 4/

Parts list of RM7LD (EDMS Issue 2.1) Layout 03 Code: 0201682

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R101	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R102	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R103	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R104	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R109	1620017	Res network 0w06 2x100r j		0404
R110	1430826	Chip resistor	680 k	5 % 0.063 W 0402
R111	1430820	Chip resistor	470 k	5 % 0.063 W 0402
R118	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R120	1620025	Res network 0w06 2x100k j		0404
R122	1620019	Res network 0w06 2x10k j		0404
R124	1430726	Chip resistor	100	5 % 0.063 W 0402
R125	1430726	Chip resistor	100	5 % 0.063 W 0402
R128	1430718	Chip resistor	47	5 % 0.063 W 0402
R131	1419003	Chip resistor	0.22	5 % 1210
R154	1430325	Chip resistor	2.2 M	5 % 0.063 W 0603
R201	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R202	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R203	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R205	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R206	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R211	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R215	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R216	1430796	Chip resistor	47 k	5 % 0.063 W 0402
R252	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R256	1430718	Chip resistor	47	5 % 0.063 W 0402
R257	1430718	Chip resistor	47	5 % 0.063 W 0402
R258	1430744	Chip resistor	470	5 % 0.063 W 0402
R260	1430726	Chip resistor	100	5 % 0.063 W 0402
R261	1430744	Chip resistor	470	5 % 0.063 W 0402
R265	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R266	1430806	Chip resistor	120 k	5 % 0.063 W 0402
R267	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R268	1430744	Chip resistor	470	5 % 0.063 W 0402
R269	1620025	Res network 0w06 2x100k j		0404
R270	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R271	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R272	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R273	1430792	Chip resistor	33 k	5 % 0.063 W 0402
R274	1430812	Chip resistor	220 k	5 % 0.063 W 0402
R275	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R276	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R277	1430145	Chip resistor	100 k	1 % 0.063 W 0402
R278	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R281	1620017	Res network 0w06 2x100r j		0404

R285	1825021	Chip varistor vwm14v vc46v		0402
R286	1825021	Chip varistor vwm14v vc46v		0402
R287	1825021	Chip varistor vwm14v vc46v		0402
R310	1430780	Chip resistor	12 k	5 % 0.063 W 0402
R311	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R350	1430389	Chip resistor	18	5 % 0.1 W 0603
R351	1430389	Chip resistor	18	5 % 0.1 W 0603
R352	1430389	Chip resistor	18	5 % 0.1 W 0603
R353	1430389	Chip resistor	18	5 % 0.1 W 0603
R371	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R372	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R373	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R374	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R403	1430702	Chip resistor	12	5 % 0.063 W 0402
R404	1430702	Chip resistor	12	5 % 0.063 W 0402
R510	1620003	Res network 0w03 4x100r j		0804
R530	1620019	Res network 0w06 2x10k j		0404
R532	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R533	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R541	1620033	Res network 0w06 2x5k6 j		0404
R546	1620033	Res network 0w06 2x5k6 j		0404
R563	1430187	Chip resistor	47 k	1 % 0.063 W 0402
R564	1430746	Chip resistor	560	5 % 0.063 W 0402
R565	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R610	1430726	Chip resistor	100	5 % 0.063 W 0402
R611	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R613	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R614	1620017	Res network 0w06 2x100r j		0404
R640	1430732	Chip resistor	180	5 % 0.063 W 0402
R643	1430764	Chip resistor	3.3 k	5 % 0.063 W 0402
R645	1430846	Chip resistor	2.7 k	1 % 0.063 W 0402
R670	1430730	Chip resistor	150	5 % 0.063 W 0402
R671	1430730	Chip resistor	150	5 % 0.063 W 0402
R700	1430726	Chip resistor	100	5 % 0.063 W 0402
R704	1430726	Chip resistor	100	5 % 0.063 W 0402
R710	1430702	Chip resistor	12	5 % 0.063 W 0402
R711	1430734	Chip resistor	220	5 % 0.063 W 0402
R712	1430702	Chip resistor	12	5 % 0.063 W 0402
R723	1620505	Res network 0w04		2DB ATT 0404
R730	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R731	1430740	Chip resistor	330	5 % 0.063 W 0402
R732	1430746	Chip resistor	560	5 % 0.063 W 0402
R740	1430726	Chip resistor	100	5 % 0.063 W 0402
R741	1430726	Chip resistor	100	5 % 0.063 W 0402
R742	1430726	Chip resistor	100	5 % 0.063 W 0402
R744	1430726	Chip resistor	100	5 % 0.063 W 0402
R751	1430734	Chip resistor	220	5 % 0.063 W 0402
R754	1430718	Chip resistor	47	5 % 0.063 W 0402
R755	1430714	Chip resistor	33	5 % 0.063 W 0402

R756	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R757	1430754	Chip resistor	1.0 k	5 % 0.063 W 0402
R758	1430710	Chip resistor	22	5 % 0.063 W 0402
R763	1430740	Chip resistor	330	5 % 0.063 W 0402
R764	1430758	Chip resistor	1.5 k	5 % 0.063 W 0402
R781	1430690	Chip jumper		0402
R790	1430803	Chip resistor	4.7 k	1 % 0.063 W 0402
R791	1430756	Chip resistor	1.2 k	5 % 0.063 W 0402
R792	1430848	Chip resistor	12 k	1 % 0.063 W 0402
R800	1430778	Chip resistor	10 k	5 % 0.063 W 0402
R801	1430841	Chip resistor	6.8 k	1 % 0.063 W 0402
R802	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R805	1620505	Res network 0w04		2DB ATT 0400404
R807	1430728	Chip resistor	120	5 % 0.063 W 0402
R829	1430752	Chip resistor	820	5 % 0.063 W 0402
R830	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R831	1430718	Chip resistor	47	5 % 0.063 W 0402
R832	1430788	Chip resistor	22 k	5 % 0.063 W 0402
R833	1430762	Chip resistor	2.2 k	5 % 0.063 W 0402
R834	1430812	Chip resistor	220 k	5 % 0.063 W 0402
C101	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C102	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C103	2312411	Ceramic cap.	1.0 u	20 % 25 V 1206
C104	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C105	2611719	Tantalum cap.	10 u	20 % 10 V 2.0x1.35x1.35
C106	2320481	Ceramic cap.	5R 1 u	10 % 0603
C107	2320481	Ceramic cap.	5R 1 u	10 % 0603
C108	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C109	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C110	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C113	2320508	Ceramic cap.	1.0 p	0.25 % 50 V 0402
C114	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C116	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C119	2320481	Ceramic cap.	5R 1 u	10 % 0603
C120	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C121	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C127	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C128	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C129	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C131	2611719	Tantalum cap.	10 u	20 % 10 V 2.0x1.35x1.35
C132	2611741	Tantalum cap.	4.7 u	20 % 10 V 2.0x1.3x1.2
C133	2320481	Ceramic cap.	5R 1 u	10 % 0603
C140	2320481	Ceramic cap.	5R 1 u	10 % 0603
C142	2611719	Tantalum cap.	10 u	20 % 10 V 2.0x1.35x1.35
C150	2320481	Ceramic cap.	5R 1 u	10 % 0603
C151	2320481	Ceramic cap.	5R 1 u	10 % 0603
C152	2320481	Ceramic cap.	5R 1 u	10 % 0603
C153	2320481	Ceramic cap.	5R 1 u	10 % 0603
C154	2320481	Ceramic cap.	5R 1 u	10 % 0603

C160	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C161	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C162	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C163	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C164	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C165	2611737	Tantalum cap.	68 u	20 % 16 V 7.3x4.3x2.0
C168	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C201	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C203	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C204	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C205	2610203	Tantalum cap.	2.2 u	20 % 10 V 2.0x1.3x1.2
C206	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C207	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C208	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C209	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C211	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C212	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C213	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C217	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C218	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C220	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C247	2320778	Ceramic cap.	10 n	10 % 16 V 0402
C248	2320481	Ceramic cap.	5R 1 u	10 % 0603
C251	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C253	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C255	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C257	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C258	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C259	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C261	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C262	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C263	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C264	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C268	2320481	Ceramic cap.	5R 1 u	10 % 0603
C270	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C274	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C276	2320481	Ceramic cap.	5R 1 u	10 % 0603
C278	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C283	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C284	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C285	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C286	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C287	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C291	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C292	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C293	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C294	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C295	2320744	Ceramic cap.	1.0 n	10 % 50 V 0402
C296	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2

C297	2610207	Tantalum cap.	10 u	20 % 2.0x1.3x1.2
C310	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C330	2320481	Ceramic cap.	5R 1 u	10 % 0603
C331	2320779	Ceramic cap.	100 n	10 % 16 V 0603
C342	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C371	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C372	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C373	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C400	2320481	Ceramic cap.	5R 1 u	10 % 0603
C401	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C405	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C406	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C510	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C511	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C512	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C513	2320135	Ceramic cap.	150 n	10 % 10 V 0603
C520	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C521	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C522	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C523	2320485	Ceramic cap.	470 p	5 % 50 V 0603
C530	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C531	2320631	Ceramic cap.	180 p	5 % 25 V 0402
C532	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C533	2320781	Ceramic cap.	47 n	20 % 16 V 0603
C534	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C535	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C540	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C541	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C550	2320598	Ceramic cap.	3.9 n	5 % 50 V 0402
C557	2320554	Ceramic cap.	56 p	5 % 50 V 0402
C560	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C561	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C562	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C564	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C600	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C601	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C610	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C611	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C612	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C613	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C614	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C615	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C620	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C621	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C630	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C631	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C640	2320516	Ceramic cap.	1.5 p	0.25 % 50 V 0402
C642	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C643	2320540	Ceramic cap.	15 p	5 % 50 V 0402

C644	2320530	Ceramic cap.	5.6 p	0.25 % 50 V 0402
C645	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C700	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C702	2320602	Ceramic cap.	4.7 p	0.25 % 50 V 0402
C703	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C704	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C714	2320783	Ceramic cap.	33 n	10 % 10 V 0402
C720	2320556	Ceramic cap.	68 p	5 % 50 V 0402
C730	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C731	2320756	Ceramic cap.	3.3 n	10 % 50 V 0402
C733	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C741	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C743	2320538	Ceramic cap.	12 p	5 % 50 V 0402
C746	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C747	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C754	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C755	2320481	Ceramic cap.	5R 1 u	10 % 0603
C757	2320514	Ceramic cap.	1.2 p	0.25 % 50 V 0402
C758	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C759	2320546	Ceramic cap.	27 p	5 % 50 V 0402
C760	2320526	Ceramic cap.	3.9 p	0.25 % 50 V 0402
C761	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C762	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C782	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402
C783	2312401	Ceramic cap.	1.0 u	10 % 10 V 0805
C785	2320805	Ceramic cap.	100 n	10 % 10 V 0402
C788	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C790	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C792	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C793	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C799	2320534	Ceramic cap.	8.2 p	0.25 % 50 V 0402
C801	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C802	2312221	Ceramic cap.	4.7 n	5 % 25 V 0805
C803	2320564	Ceramic cap.	150 p	5 % 50 V 0402
C804	2320518	Ceramic cap.	1.8 p	0.25 % 50 V 0402
C805	2610203	Tantalum cap.	2.2 u	20 % 10 V 2.0x1.3x1.2
C829	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C830	2320560	Ceramic cap.	100 p	5 % 50 V 0402
C831	2310793	Ceramic cap.	2.2 u	10 % 10 V 0805
C832	2320620	Ceramic cap.	10 n	5 % 16 V 0402
C833	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C834	2320584	Ceramic cap.	1.0 n	5 % 50 V 0402
C835	2320540	Ceramic cap.	15 p	5 % 50 V 0402
C836	2320544	Ceramic cap.	22 p	5 % 50 V 0402
C860	2320548	Ceramic cap.	33 p	5 % 50 V 0402
C861	2320621	Ceramic cap.	0.5 p	0.25 % 50 V 0402
C862	2320520	Ceramic cap.	2.2 p	0.25 % 50 V 0402
C863	2320536	Ceramic cap.	10 p	5 % 50 V 0402
C864	2320524	Ceramic cap.	3.3 p	0.25 % 50 V 0402

L103	3203705	Ferrite bead 0.015r 42r/100m 0805	0805
L104	3203705	Ferrite bead 0.015r 42r/100m 0805	0805
L271	3203709	Ferrite bead 0.5r 120r/100m 0402	0402
L272	3203709	Ferrite bead 0.5r 120r/100m 0402	0402
L283	3640035	Filt z>450r/100m 0r7max 0.2a 0603	0603
L284	3640035	Filt z>450r/100m 0r7max 0.2a 0603	0603
L287	3203709	Ferrite bead 0.5r 120r/100m 0402	0402
L503	3646051	Chip coil 3 n	Q=28/800M 0402
L504	3646063	Chip coil 22 n	5 % Q=28/800 MHz 0402
L505	3646051	Chip coil 3 n	Q=28/800M 0402
L506	3646053	Chip coil 4 n	Q=28/800M 0402
L510	3646059	Chip coil 5 n	Q=28/800M 0402
L553	4551013	Dir.coupl.897.5/1747.5mhz 2.1x1.3	2.1x1.3
L600	3646069	Chip coil 33 n	5 % Q=23/800 MHz 0402
L631	3646065	Chip coil 12 n	5 % Q=31/800 MHz 0402
L751	3203705	Ferrite bead 0.015r 42r/100m 0805	0805
L752	3645201	Chip coil 56 n	5 % Q=38/200 MHz 0603
L800	3648808	Chip coil	10 % Q=50 1206
B100	4510219	Crystal 32.768 k	+−30PPM 9PF
B301	5140157	Buzzer 85db 3000hz 3.0v 8.5x8.5x	8.5x8.5x3
G800	4350223	Vco 3420−3840mhz 2.7v 20ma 9x7	9X7
G830	4510261	VCTCXO 26 M	+−5PPM 2.7V GSM
F101	5119019	SM, fuse f 1.5a 32v	0603
Z600	4511149	Dual saw filt925−960/1805−1880mhz	
Z620	4511149	Dual saw filt925−960/1805−1880mhz	
Z670	4550201	Dipl+2xsw 880−960/1710−1880mhz	7X5
Z671	4550067	Dipl 880−960/1710−1880mhz	3.2x2.5
Z700	4511147	Saw filter 897.5+−17.5 M	/3DB 3X3 3X3
H400	9517046	Rf−can dmd05114	nsm−3
T600	3640405	Transf balun 900mhz+−100mhz	1210
T630	3640421	Transf balun 1.8ghz+−100mhz	1206
T700	3640405	Transf balun 900mhz+−100mhz	1210
T740	3640421	Transf balun 1.8ghz+−100mhz	1206
T800	3640423	Transf balun 3.7ghz+−300mhz	0805
V100	1825023	Chip varistor vwm9v vc20v	0805
V101	4210052	Transistor DTC114EE	nnp RB V EM3
V104	4113671	Tvs esda6v1w5 ** no new design **	**
V116	4110067	Schottky diode MBR0520L	20 V 0.5 A SOD123
V250	4210100	Transistor BC848W	nnp 30 V SOT323
V251	4210100	Transistor BC848W	nnp 30 V SOT323
V252	4210052	Transistor DTC114EE	nnp RB V EM3
V278	4110089	Diode x 2 BAV70W	70 V .5 A 4 ns SOT323
V321	4864561	Led	0603
V322	4864561	Led	0603
V323	4864561	Led	0603
V324	4864561	Led	0603
V331	4864551	Led	0603
V332	4864551	Led	0603
V333	4864551	Led	0603

V334	4864551	Led		0603
V335	4864551	Led		0603
V336	4864551	Led		0603
V350	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V360	4110089	Diode x 2	BAV70W	70 V .5 A 4 ns
SOT323				
V730	4110014	Schottky diode	BAS70-07	NE W DESIGN**
V800	4210100	Transistor	BC848W	npn 30 V SOT323
V801	4210183	Transistor	BFP193W	npn 8G V SOT343
V903	4210015	Transistor	BFP405	npn 4. V SOT343
V904	4210074	Transistor	BFP420	npn 4. V SOT343
V905	4210100	Transistor	BC848W	npn 30 V SOT323
V907	4210100	Transistor	BC848W	npn 30 V SOT323
D200	4370687	Mad2wd1 v16 rom6 f741541h ubga144		UBGA144
D210	4340747	Combomemory 16m flash+2m sram csp		CSP
N100	4370719	Ccont 2m wfd163mg64t/8 lfbga8x8		
N101	4370621	Chaps v2.0 u423v20g36t lbg6x6		
N220	4340413	IC, regulator	TK11230BMC	3.0 V SOT23L
N250	4370643	Cobba_gjp v4.1 v257bg64t/8 bga64		BGA64
N310	4370433	Uiswitch sttm23av20t tssop20		TSSOP20
N400	4860081	Irda qsdl-m134#021 115.2kbps 2v7		2V7
N401	4340335	IC, regulator	TK11228AM	SSO6
N505	4370731	Hagar 4 sttza8ig80t lfbga80		LFBGA80
N600	4340719	IC, regulator	TK11247BMC	4.7 V SOT23L
N702	4350203	IC, pow.amp.		3.5 V 3.5V
S330	5209001	SM, sw tact spst 12v 50ma side k		KEY
M300	9854352	PCB UX7V 4.5X4.5X1.6 D 140/PA		

Parts list of RM7LD (EDMS Issue 2.4) Layout 03 Code: 0201682

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chipres 0w06 680k j		
R101	1430145	Chipres 0w06 100k f		200P
R102	1430796	Chipres 0w06 47k j		
R103	1430803	Chipres 0w06 4k7 f		200PP
R104	1430796	Chipres 0w06 47k j		
R109	1620017	Res network 0w06		2x100r
R110	1430826	Chipres 0w06 680k j		
R111	1430820	Chipres 0w06 470k j		
R118	1430778	Chipres 0w06 10k j		
R120	1620025	Res network 0w06		2x100k
R122	1620019	Res network 0w06 2x10k		J
R124	1430726	Chipres 0w06 100r j		
R125	1430726	Chipres 0w06 100r j		
R128	1430718	Chipres 0w06 47r j		
R131	1419003	Chipres 0w5 0r22 j		200PP
R154	1430325	Chipres 0w06 2m2 j		
R201	1430812	Chipres 0w06 220k j		
R202	1430145	Chipres 0w06 100k f		200P
R203	1430803	Chipres 0w06 4k7 f		200PP
R205	1430762	Chipres 0w06 2k2		
R206	1430762	Chipres 0w06 2k2		
R211	1430778	Chipres 0w06 10k j		
R215	1430796	Chipres 0w06 47k j		
R216	1430796	Chipres 0w06 47k j		
R252	1430754	Chipres 0w06 1k0 j		
R256	1430718	Chipres 0w06 47r j		
R257	1430718	Chipres 0w06 47r j		
R258	1430744	Chipres 0w06 470r j		
R260	1430726	Chipres 0w06 100r j		
R261	1430744	Chipres 0w06 470r j		
R265	1430145	Chipres 0w06 100k f		200P
R266	1430806	Chipres 0w06 120k j		
R267	1430762	Chipres 0w06 2k2 j		
R268	1430744	Chipres 0w06 470r j		
R269	1620025	Res network 0w06		2x100k
R270	1430792	Chipres 0w06 33k j		
R271	1430145	Chipres 0w06 100k f		200P
R272	1430145	Chipres 0w06 100k f		200P
R273	1430792	Chipres 0w06 33k j		
R274	1430812	Chipres 0w06 220k j		
R275	1430762	Chipres 0w06 2k2 j		
R276	1430762	Chipres 0w06 2k2 j		
R277	1430145	Chipres 0w06 100k f		200P
R278	1430760	Chipres 0w06 1k8 j		
R281	1620017	Res network 0w06		2x100r

R285	1825021	Chip varistor vwm14v	VC4
R286	1825021	Chip varistor vwm14v	VC4
R287	1825021	Chip varistor vwm14v	VC4
R310	1430780	Chipres 0w06 12k j	
R311	1430778	Chipres 0w06 10k j	
R350	1430389	Chipres 0w1 18r j	
R351	1430389	Chipres 0w1 18r j	
R352	1430389	Chipres 0w1 18r j	
R353	1430389	Chipres 0w1 18r j	
R371	1430754	Chipres 0w06 1k0 j	
R372	1430754	Chipres 0w06 1k0 j	
R373	1430754	Chipres 0w06 1k0 j	
R374	1430754	Chipres 0w06 1k0 j	
R403	1430702	Chipres 0w06 12r j	
R404	1430702	Chipres 0w06 12r j	
R510	1620003	Res network 0w03	4x100r
R530	1620019	Res network 0w06 2x10k j	J
R532	1430846	Chipres 0w06 2k7 f	
R533	1430778	Chipres 0w06 10k j	
R541	1620033	Res network 0w06 2x5k6	J
R546	1620033	Res network 0w06 2x5k6	J
R563	1430187	Chipres 0w06 47k f	200PP
R564	1430746	Chipres 0w06 560r j	
R565	1430803	Chipres 0w06 4k7 f	200PP
R610	1430726	Chipres 0w06 100r j	
R611	1430846	Chipres 0w06 2k7 f	
R613	1430764	Chipres 0w06 3k3 j	
R614	1620017	Res network 0w06	2x100r
R640	1430732	Chipres 0w06 180r j	
R643	1430764	Chipres 0w06 3k3 j	
R645	1430846	Chipres 0w06 2k7 f	
R670	1430730	Chipres 0w06 150r j	
R671	1430730	Chipres 0w06 150r j	
R700	1430726	Chipres 0w06 100r j	
R704	1430726	Chipres 0w06 100r j	
R710	1430702	Chipres 0w06 12r j	
R711	1430734	Chipres 0w06 220r j	
R712	1430702	Chipres 0w06 12r j	
R723	1620505	Res network 0w04	2DB ATATT
R730	1430762	Chipres 0w06 2k2 j	
R731	1430740	Chipres 0w06 330r j	
R732	1430746	Chipres 0w06 560r j	
R740	1430726	Chipres 0w06 100r j	
R741	1430726	Chipres 0w06 100r j	
R742	1430726	Chipres 0w06 100r j	
R744	1430726	Chipres 0w06 100r j	
R751	1430734	Chipres 0w06 220r j	
R754	1430718	Chipres 0w06 47r j	
R755	1430714	Chipres 0w06 33r j	

R756	1430754	Chipres 0w06 1k0 j	
R757	1430754	Chipres 0w06 1k0 j	
R758	1430710	Chipres 0w06 22r j	
R763	1430740	Chipres 0w06 330r j	
R764	1430758	Chipres 0w06 1k5 j	
R781	1430690	Chipres jumper	0R0
R790	1430803	Chipres 0w06 4k7 f 200pp	200PP
R791	1430756	Chipres 0w06 1k2 j	
R792	1430848	Chipres 0w06 12k f	
R800	1430778	Chipres 0w06 10k j	
R801	1430841	Chipres 0w06 6k8 f	
R802	1430762	Chipres 0w06 2k2 j	
R805	1620505	Res network 0w04	2DB ATATT
R807	1430728	Chipres 0w06 120r j	
R829	1430752	Chipres 0w06 820r j	
R830	1430762	Chipres 0w06 2k2 j	
R831	1430718	Chipres 0w06 47r j	
R832	1430788	Chipres 0w06 22k j	
R833	1430762	Chipres 0w06 2k2 j	
R834	1430812	Chipres 0w06 220k j	
C101	2320548	Chipcap np0 33p j 50v	
C102	2320538	Chipcap np0 12p j 50v	
C103	2312411	Chipcap x5r 1u0 m 25v	
C104	2320783	Chipcap x7r 33n k 10v	
C105	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C106	2320481	Chipcap x5r 1u k 6v3	
C107	2320481	Chipcap x5r 1u k 6v3	
C108	2312401	Chipcap x5r 1u0 k 10v	
C109	2320544	Chipcap np0 22p j 50v	
C110	2320544	Chipcap np0 22p j 50v	
C113	2320508	Chipcap np0 1p0 c 50v	
C114	2320546	Chipcap np0 27p j 50v	
C116	2312401	Chipcap x5r 1u0 k 10v	
C119	2320481	Chipcap x5r 1u k 6v3	
C120	2320778	Chipcap x7r 10n k 16v	
C121	2320778	Chipcap x7r 10n k 16v	
C127	2320805	Chipcap x5r 100n k 10v	
C128	2312401	Chipcap x5r 1u0 k 10v	
C129	2312401	Chipcap x5r 1u0 k 10v	
C131	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C132	2611741	Chiptcap 4u7 m 10v 2.	2.
C133	2320481	Chipcap x5r 1u k 6v3	
C140	2320481	Chipcap x5r 1u k 6v3	
C142	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C150	2320481	Chipcap x5r 1u k 6v3	
C151	2320481	Chipcap x5r 1u k 6v3	
C152	2320481	Chipcap x5r 1u k 6v3	
C153	2320481	Chipcap x5r 1u k 6v3	
C154	2320481	Chipcap x5r 1u k 6v3	

C160	2320546	Chipcap np0 27p j 50v	
C161	2320546	Chipcap np0 27p j 50v	
C162	2320540	Chipcap np0 15p j 50v	
C163	2320602	Chipcap np0 4p7 c 50v	
C164	2320536	Chipcap np0 10p j 50v	
C165	2611737	Chiptcap 68u m 16v	7.
C168	2320536	Chipcap np0 10p j 50v	
C201	2320783	Chipcap x7r 33n k 10v	
C203	2320778	Chipcap x7r 10n k 16v	
C204	2320778	Chipcap x7r 10n k 16v	
C205	2610203	Chiptcap 2u2 m 10v	2.
C206	2320778	Chipcap x7r 10n k 16v	
C207	2320778	Chipcap x7r 10n k 16v	
C208	2320778	Chipcap x7r 10n k 16v	
C209	2320778	Chipcap x7r 10n k 16v	
C211	2320783	Chipcap x7r 33n k 10v	
C212	2320779	Chipcap x7r 100n k 16v	
C213	2320744	Chipcap x7r 1n0 k 50v	
C217	2320778	Chipcap x7r 10n k 16v	
C218	2320546	Chipcap np0 27p j 50v	
C220	2320778	Chipcap x7r 10n k 16v	
C247	2320778	Chipcap x7r 10n k 16v	
C248	2320481	Chipcap x5r 1u k 6v3	
C251	2320783	Chipcap x7r 33n k 10v	
C253	2320783	Chipcap x7r 33n k 10v	
C255	2320744	Chipcap x7r 1n0 k 50v	
C257	2320783	Chipcap x7r 33n k 10v	
C258	2320783	Chipcap x7r 33n k 10v	
C259	2320783	Chipcap x7r 33n k 10v	
C261	2320744	Chipcap x7r 1n0 k 50v	
C262	2320783	Chipcap x7r 33n k 10v	
C263	2320783	Chipcap x7r 33n k 10v	
C264	2320544	Chipcap np0 22p j 50v	
C268	2320481	Chipcap x5r 1u k 6v3	
C270	2610207	Chiptcap 10u m 6v3	2.
C274	2320544	Chipcap np0 22p j 50v	
C276	2320481	Chipcap x5r 1u k 6v3	
C278	2320544	Chipcap np0 22p j 50v	
C283	2320744	Chipcap x7r 1n0 k 50v	
C284	2320744	Chipcap x7r 1n0 k 50v	
C285	2320598	Chipcap x7r 3n9 j 50v	
C286	2320598	Chipcap x7r 3n9 j 50v	
C287	2320744	Chipcap x7r 1n0 k 50v	
C291	2320546	Chipcap np0 27p j 50v	
C292	2320546	Chipcap np0 27p j 50v	
C293	2320544	Chipcap np0 22p j 50v	
C294	2320744	Chipcap x7r 1n0 k 50v	
C295	2320744	Chipcap x7r 1n0 k 50v	
C296	2610207	Chiptcap 10u m 6v3	2.

C297	2610207	Chiptcap 10u m 6v3	2.
C310	2312401	Chipcap x5r 1u0 k 10v	
C330	2320481	Chipcap x5r 1u k 6v3	
C331	2320779	Chipcap x7r 100n k 16v	
C342	2320560	Chipcap np0 100p j 50v	
C371	2320564	Chipcap np0 150p j 50v	
C372	2320564	Chipcap np0 150p j 50v	
C373	2320564	Chipcap np0 150p j 50v	
C400	2320481	Chipcap x5r 1u k 6v3	
C401	2320805	Chipcap x5r 100n k 10v	
C405	2320544	Chipcap np0 22p j 50v	
C406	2320805	Chipcap x5r 100n k 10v	
C510	2320135	Chipcap x7r 150n k 10v	
C511	2320135	Chipcap x7r 150n k 10v	
C512	2320135	Chipcap x7r 150n k 10v	
C513	2320135	Chipcap x7r 150n k 10v	
C520	2320485	Chipcap np0 470p j 50v	
C521	2320485	Chipcap np0 470p j 50v	
C522	2320485	Chipcap np0 470p j 50v	
C523	2320485	Chipcap np0 470p j 50v	
C530	2320631	Chipcap np0 180p j 25v	
C531	2320631	Chipcap np0 180p j 25v	
C532	2320781	Chipcap x7r 47n m 16v	
C533	2320781	Chipcap x7r 47n m 16v	
C534	2320783	Chipcap x7r 33n k 10v	
C535	2320546	Chipcap np0 27p j 50v	
C540	2320556	Chipcap np0 68p j 50v	
C541	2320556	Chipcap np0 68p j 50v	
C550	2320598	Chipcap x7r 3n9 j 50v	
C557	2320554	Chipcap np0 56p j 50v	
C560	2320548	Chipcap np0 33p j 50v	
C561	2320620	Chipcap x7r 10n j 16v	
C562	2320546	Chipcap np0 27p j 50v	
C564	2320783	Chipcap x7r 33n k 10v	
C600	2320560	Chipcap np0 100p j 50v	
C601	2320560	Chipcap np0 100p j 50v	
C610	2320602	Chipcap np0 4p7 c 50v	
C611	2320584	Chipcap x7r 1n0 j 50v	
C612	2320556	Chipcap np0 68p j 50v	
C613	2320556	Chipcap np0 68p j 50v	
C614	2320556	Chipcap np0 68p j 50v	
C615	2320560	Chipcap np0 100p j 50v	
C620	2320805	Chipcap x5r 100n k 10v	
C621	2320805	Chipcap x5r 100n k 10v	
C630	2320530	Chipcap np0 5p6 c 50v	
C631	2320530	Chipcap np0 5p6 c 50v	
C640	2320516	Chipcap np0 1p5 c 50v	
C642	2320584	Chipcap x7r 1n0 j 50v	
C643	2320540	Chipcap np0 15p j 50v	

C644	2320530	Chipcap np0 5p6 c 50v	
C645	2320540	Chipcap np0 15p j 50v	
C700	2320540	Chipcap np0 15p j 50v	
C702	2320602	Chipcap np0 4p7 c 50v	
C703	2320526	Chipcap np0 3p9 c 50v	
C704	2320584	Chipcap x7r 1n0 j 50v	
C714	2320783	Chipcap x7r 33n k 10v	
C720	2320556	Chipcap np0 68p j 50v	
C730	2320546	Chipcap np0 27p j 50v	
C731	2320756	Chipcap x7r 3n3 k 50v	
C733	2320546	Chipcap np0 27p j 50v	
C741	2320540	Chipcap np0 15p j 50v	
C743	2320538	Chipcap np0 12p j 50v	
C746	2320548	Chipcap np0 33p j 50v	
C747	2320540	Chipcap np0 15p j 50v	
C754	2320620	Chipcap x7r 10n j 16v	
C755	2320481	Chipcap x5r 1u k 6v3	
C757	2320514	Chipcap np0 1p2 c 50v	
C758	2320584	Chipcap x7r 1n0 j 50v	
C759	2320546	Chipcap np0 27p j 50v	
C760	2320526	Chipcap np0 3p9 c 50v	
C761	2320536	Chipcap np0 10p j 50v	
C762	2320536	Chipcap np0 10p j 50v	
C782	2320524	Chipcap np0 3p3 c 50v	
C783	2312401	Chipcap x5r 1u0 k 10v	
C785	2320805	Chipcap x5r 100n k 10v	
C788	2320621	Chipcap np0 0p5 c 50v	
C790	2320518	Chipcap np0 1p8 c 50v	
C792	2320560	Chipcap np0 100p j 50v	
C793	2320540	Chipcap np0 15p j 50v	
C799	2320534	Chipcap np0 8p2 c 50v	
C801	2320564	Chipcap np0 150p j 50v	
C802	2312221	Chipcap np0 4n7 j 25v q4	Q4
C803	2320564	Chipcap np0 150p j 50v	
C804	2320518	Chipcap np0 1p8 c 50v	
C805	2610203	Chiptcap 2u2 m 10v 2.	2.
C829	2320560	Chipcap np0 100p j 50v	
C830	2320560	Chipcap np0 100p j 50v	
C831	2310793	Chipcap x5r 2u2 k 10v	
C832	2320620	Chipcap x7r 10n j 16v	
C833	2320584	Chipcap x7r 1n0 j 50v	
C834	2320584	Chipcap x7r 1n0 j 50v	
C835	2320540	Chipcap np0 15p j 50v	
C836	2320544	Chipcap np0 22p j 50v	
C860	2320548	Chipcap np0 33p j 50v	
C861	2320621	Chipcap np0 0p5 c 50v	
C862	2320520	Chipcap np0 2p2 c 50v	
C863	2320536	Chipcap np0 10p j 50v	
C864	2320524	Chipcap np0 3p3 c 50v	

L103	3203705	Ferrite bead 0.015r	42R/
L104	3203705	Ferrite bead 0.015r	42R/
L271	3203709	Ferrite bead 0.5r	120R/1
L272	3203709	Ferrite bead 0.5r	120R/1
L283	3640035	Filt z+AD4-450r/100m	0R7MAX
L284	3640035	Filt z+AD4-450r/100m	0R7MAX
L287	3203709	Ferrite bead 0.5r	120R/1
L503	3646051	Chip coil 3n9 +-0n3	Q28/
L504	3646063	Chip coil 22n j	Q28/800M
L505	3646051	Chip coil 3n9 +-0n3 q28/	Q28/
L506	3646053	Chip coil 4n7 +-0n3 q28/	Q28/
L510	3646059	Chip coil 5n6 +-0n3 q28/	Q28/
L553	4551013	Dir.coupl.897.5/1747.5mh	
L600	3646069	Chip coil 33n j q23/800m	Q23/800M
L631	3646065	Chip coil 12n j q31/800m	Q31/800M
L751	3203705	Ferrite bead 0.015r 42r/	42R/
L752	3645201	Chip coil 56nh j q38/200	Q38/200
L800	3648808	Chip coil 10u K Q=50	1
B100	4510219	Crystal 32.768KHZ+-30PPM	
B301	5140157	Buzzer 85db 3000hz 3.0v	3.0V
G800	4350223	Vco 3420-3840mhz 2.7v 20	20
G830	4510261	Vctcxo 26mhz+-5ppm 2.7v	2.7V
F101	5119019	sm fuse f 1.5a 32v	0603
Z600	4511149	Dual saw filt	FILT925-960/180
Z620	4511149	Dual saw filt	FILT925-960/180
Z670	4550201	Dipl+2xsw 8w-960/1710-18	
Z671	4550067	Dipl 880-960/1710-1880mh	
Z700	4511147	saw filt	897.5+-17.5MHZ/
H400	9517046	Rf-can	dmd05114 nsm-3
T600	3640405	transf balun 900mhz10	900MHZ10
T630	3640421	transf balun 1.8ghz10	1.8GHZ10
T700	3640405	transf balun 900mhz10	900MHZ10
T740	3640421	transf balun 1.8ghz10	1.8GHZ10
T800	3640423	transf balun 3.7ghz30	3.7GHZ30
V100	1825023	Chip varistor vwm9v	VC20
V101	4210052	tr dtc114ee +ACoAKgAq- no new d	D
V104	4113671	tvS esda6v1w5 +ACoAKg- no new	NEW
V116	4110067	sch di mbr0520l +ACoAKg-no new	NEW
V250	4210100	tr bc848w n 30v 0.1a100m	0.1A100M
V251	4210100	tr bc848w n 30v 0.1a100m	0.1A100M
V252	4210052	tr dtc114ee +ACoAKgAq- no new d	D
V278	4110089	Dix2 bav70w cc 70v .5a	4
V321	4864561	led cl270hb blue 470nm	5
V322	4864561	led cl270hb blue 470nm	5
V323	4864561	led cl270hb blue 470nm	5
V324	4864561	led cl270hb blue 470nm	5
V331	4864551	led cl191b1 blue468nm	VF
V332	4864551	led cl191b1 blue468nm	VF
V333	4864551	led cl191b1 blue468nm	VF

V334	4864551	led cl191b1 blue468nm	VF
V335	4864551	led cl191b1 blue468nm	VF
V336	4864551	led cl191b1 blue468nm	VF
V350	4110089	Dix2 bav70w cc 70v .5a	4
V360	4110089	Dix2 bav70w cc 70v .5a	4
V730	4110014	sch di bas70-07 +ACoAKg	NEW
V800	4210100	tr bc848w n 30v	0.1A100M
V801	4210183	tr bfp193w n 8ghz	F1.3-2
V903	4210015	tr bfp405 n 4.5v12ma	20G
V904	4210074	tr bfp420 n 4.5v35ma	20G
V905	4210100	tr bc848w n 30v	0.1A100M
V907	4210100	tr bc848w n 30v	0.1A100M
D200	4370687	mad2wd1 v16 rom6	F741541
D210	4340747	Combomemory 16m	FLASH
N100	4370719	Ccont 2m	wfd163mg64t/8 l
N101	4370807	Chaps v3.1 tu01balt	
N220	4340413	tk11230bmc volt reg	3.0V
N250	4370793	Cobba+AF8-gjp v4.1	V257JG64T
N310	4370433	uiswitch sttm23av20t	
N400	4860081	irda rpm871-l1e2	115KBPS
N401	4340335	tk11228am	REG2.8V+-80MV1
N505	4370731	hagar 4 sttza8ig	80t
N600	4340719	tk11247bmc volt reg 4.7v	4.7V
N702	4350203	pw amp 880-915/1710-1785	
S330	5209001	sm sw tact spst 12v	50MA
	9854538	PWB RM7LD 40.3X95.9X1.0	

Parts list of RM7LD (EDMS Issue 3.2) Code: 0201682

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chipres 0w06 680k j		
R101	1430145	Chipres 0w06 100k f 200p		200P
R102	1430796	Chipres 0w06 47k j		
R103	1430803	Chipres 0w06 4k7 f 200pp		200PP
R104	1430796	Chipres 0w06 47k j		
R109	1620017	Res network 0w06 2x100r		2x100r
R110	1430826	Chipres 0w06 680k j		
R111	1430820	Chipres 0w06 470k j		
R118	1430778	Chipres 0w06 10k j		
R120	1620025	Res network 0w06 2x100k		2x100k
R122	1620019	Res network 0w06 2x10k j		J
R124	1430726	Chipres 0w06 100r j		
R125	1430726	Chipres 0w06 100r j		
R128	1430718	Chipres 0w06 47r j		
R131	1419003	Chipres 0w5 0r22 j 200pp		200PP
R154	1430325	Chipres 0w06 2m2 j		
R201	1430812	Chipres 0w06 220k j		
R202	1430145	Chipres 0w06 100k f 200p		200P
R203	1430803	Chipres 0w06 4k7 f 200pp		200PP
R211	1430778	Chipres 0w06 10k j		
R215	1430796	Chipres 0w06 47k j		
R216	1430796	Chipres 0w06 47k j		
R252	1430754	Chipres 0w06 1k0 j		
R256	1430718	Chipres 0w06 47r j		
R257	1430718	Chipres 0w06 47r j		
R258	1430744	Chipres 0w06 470r j		
R260	1430726	Chipres 0w06 100r j		
R261	1430744	Chipres 0w06 470r j		
R265	1430145	Chipres 0w06 100k f 200p		200P
R266	1430806	Chipres 0w06 120k j		
R267	1430762	Chipres 0w06 2k2 j		
R268	1430744	Chipres 0w06 470r j		
R269	1620025	Res network 0w06 2x100k		2x100k
R270	1430792	Chipres 0w06 33k j		
R271	1430145	Chipres 0w06 100k f 200p		200P
R272	1430145	Chipres 0w06 100k f 200p		200P
R273	1430792	Chipres 0w06 33k j		
R274	1430812	Chipres 0w06 220k j		
R275	1430762	Chipres 0w06 2k2 j		
R276	1430762	Chipres 0w06 2k2 j		
R277	1430145	Chipres 0w06 100k f 200p		200P
R278	1430760	Chipres 0w06 1k8 j		
R281	1620017	Res network 0w06 2x100r		2x100r
R285	1825021	Chip varistor vwm14v vc4		VC4
R286	1825021	Chip varistor vwm14v vc4		VC4

R287	1825021	Chip varistor vwm14v vc4	VC4
R310	1430780	Chipres 0w06 12k j	
R311	1430778	Chipres 0w06 10k j	
R350	1430389	Chipres 0w1 18r j	
R351	1430389	Chipres 0w1 18r j	
R352	1430389	Chipres 0w1 18r j	
R353	1430389	Chipres 0w1 18r j	
R371	1430754	Chipres 0w06 1k0 j	
R372	1430754	Chipres 0w06 1k0 j	
R373	1430754	Chipres 0w06 1k0 j	
R374	1430754	Chipres 0w06 1k0 j	
R403	1430702	Chipres 0w06 12r j	
R404	1430702	Chipres 0w06 12r j	
R510	1620003	Res network 0w03 4x100r	4x100r
R530	1620019	Res network 0w06 2x10k j	J
R532	1430846	Chipres 0w06 2k7 f	
R533	1430778	Chipres 0w06 10k j	
R541	1620033	Res network 0w06 2x5k6 j	J
R546	1620033	Res network 0w06 2x5k6 j	J
R563	1430187	Chipres 0w06 47k f 200pp	200PP
R564	1430746	Chipres 0w06 560r j	
R565	1430803	Chipres 0w06 4k7 f 200pp	200PP
R610	1430726	Chipres 0w06 100r j	
R611	1430846	Chipres 0w06 2k7 f	
R613	1430764	Chipres 0w06 3k3 j	
R614	1620017	Res network 0w06 2x100r	2x100r
R640	1430732	Chipres 0w06 180r j	
R643	1430764	Chipres 0w06 3k3 j	
R645	1430846	Chipres 0w06 2k7 f	
R670	1430730	Chipres 0w06 150r j	
R671	1430730	Chipres 0w06 150r j	
R700	1430726	Chipres 0w06 100r j	
R704	1430726	Chipres 0w06 100r j	
R710	1430702	Chipres 0w06 12r j	
R711	1430734	Chipres 0w06 220r j	
R712	1430702	Chipres 0w06 12r j	
R723	1620505	Res network 0w04	2DB ATATT
R730	1430762	Chipres 0w06 2k2 j	
R731	1430740	Chipres 0w06 330r j	
R732	1430746	Chipres 0w06 560r j	
R740	1430726	Chipres 0w06 100r j	
R741	1430726	Chipres 0w06 100r j	
R742	1430726	Chipres 0w06 100r j	
R744	1430726	Chipres 0w06 100r j	
R751	1430734	Chipres 0w06 220r j	
R754	1430718	Chipres 0w06 47r j	
R755	1430714	Chipres 0w06 33r j	
R756	1430754	Chipres 0w06 1k0 j	
R757	1430754	Chipres 0w06 1k0 j	

R758	1430710	Chipres 0w06 22r j	
R763	1430740	Chipres 0w06 330r j	
R764	1430762	Chipres 0w06 2k2 j	
R790	1430803	Chipres 0w06 4k7 f 200pp	200PP
R791	1430756	Chipres 0w06 1k2 j	
R792	1430848	Chipres 0w06 12k f	
R800	1430778	Chipres 0w06 10k j	
R801	1430841	Chipres 0w06 6k8 f	
R802	1430762	Chipres 0w06 2k2 j	
R805	1620505	Res network 0w04	2DB ATATT
R807	1430728	Chipres 0w06 120r j	
R829	1430752	Chipres 0w06 820r j	
R830	1430762	Chipres 0w06 2k2 j	
R831	1430718	Chipres 0w06 47r j	
R832	1430788	Chipres 0w06 22k j	
R833	1430762	Chipres 0w06 2k2 j	
R834	1430812	Chipres 0w06 220k j	
C101	2320548	Chipcap np0 33p j 50v	
C102	2320538	Chipcap np0 12p j 50v	
C103	2312411	Chipcap x5r 1u0 m 25v	
C104	2320783	Chipcap x7r 33n k 10v	
C105	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C106	2320481	Chipcap x5r 1u k 6v3	
C107	2320481	Chipcap x5r 1u k 6v3	
C108	2312401	Chipcap x5r 1u0 k 10v	
C109	2320544	Chipcap np0 22p j 50v	
C110	2320544	Chipcap np0 22p j 50v	
C113	2320508	Chipcap np0 1p0 c 50v	
C114	2320546	Chipcap np0 27p j 50v	
C116	2312401	Chipcap x5r 1u0 k 10v	
C119	2320481	Chipcap x5r 1u k 6v3	
C120	2320778	Chipcap x7r 10n k 16v	
C121	2320778	Chipcap x7r 10n k 16v	
C127	2320805	Chipcap x5r 100n k 10v	
C128	2312401	Chipcap x5r 1u0 k 10v	
C129	2312401	Chipcap x5r 1u0 k 10v	
C131	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C132	2611741	Chiptcap 4u7 m 10v 2.	2.
C133	2320481	Chipcap x5r 1u k 6v3	
C140	2320481	Chipcap x5r 1u k 6v3	
C142	2611719	Chiptcap 10u m 10v 2.0x	2.0X
C150	2320481	Chipcap x5r 1u k 6v3	
C151	2320481	Chipcap x5r 1u k 6v3	
C152	2320481	Chipcap x5r 1u k 6v3	
C153	2320481	Chipcap x5r 1u k 6v3	
C154	2320481	Chipcap x5r 1u k 6v3	
C160	2320546	Chipcap np0 27p j 50v	
C161	2320546	Chipcap np0 27p j 50v	
C162	2320540	Chipcap np0 15p j 50v	

C163	2320602	Chipcap np0 4p7 c 50v		
C164	2320536	Chipcap np0 10p j 50v		
C165	2611737	Chiptcap 68u m 16v	7.	7.
C168	2320536	Chipcap np0 10p j 50v		
C201	2320783	Chipcap x7r 33n k 10v		
C203	2320778	Chipcap x7r 10n k 16v		
C204	2320778	Chipcap x7r 10n k 16v		
C205	2610203	Chiptcap 2u2 m 10v	2.	2.
C206	2320778	Chipcap x7r 10n k 16v		
C207	2320778	Chipcap x7r 10n k 16v		
C208	2320778	Chipcap x7r 10n k 16v		
C209	2320778	Chipcap x7r 10n k 16v		
C211	2320783	Chipcap x7r 33n k 10v		
C212	2320779	Chipcap x7r 100n k 16v		
C213	2320744	Chipcap x7r 1n0 k 50v		
C217	2320778	Chipcap x7r 10n k 16v		
C218	2320546	Chipcap np0 27p j 50v		
C220	2320778	Chipcap x7r 10n k 16v		
C247	2320778	Chipcap x7r 10n k 16v		
C248	2320481	Chipcap x5r 1u k 6v3		
C251	2320783	Chipcap x7r 33n k 10v		
C253	2320783	Chipcap x7r 33n k 10v		
C255	2320744	Chipcap x7r 1n0 k 50v		
C257	2320783	Chipcap x7r 33n k 10v		
C258	2320783	Chipcap x7r 33n k 10v		
C259	2320783	Chipcap x7r 33n k 10v		
C261	2320744	Chipcap x7r 1n0 k 50v		
C262	2320783	Chipcap x7r 33n k 10v		
C263	2320783	Chipcap x7r 33n k 10v		
C264	2320544	Chipcap np0 22p j 50v		
C268	2320481	Chipcap x5r 1u k 6v3		
C270	2610207	Chiptcap 10u m 6v3	2.	2.
C274	2320544	Chipcap np0 22p j 50v		
C276	2320481	Chipcap x5r 1u k 6v3		
C278	2320544	Chipcap np0 22p j 50v		
C283	2320744	Chipcap x7r 1n0 k 50v		
C284	2320744	Chipcap x7r 1n0 k 50v		
C285	2320598	Chipcap x7r 3n9 j 50v		
C286	2320598	Chipcap x7r 3n9 j 50v		
C287	2320744	Chipcap x7r 1n0 k 50v		
C291	2320546	Chipcap np0 27p j 50v		
C292	2320546	Chipcap np0 27p j 50v		
C293	2320544	Chipcap np0 22p j 50v		
C294	2320744	Chipcap x7r 1n0 k 50v		
C295	2320744	Chipcap x7r 1n0 k 50v		
C296	2610207	Chiptcap 10u m 6v3	2.	2.
C297	2610207	Chiptcap 10u m 6v3	2.	2.
C310	2312401	Chipcap x5r 1u0 k 10v		
C330	2320481	Chipcap x5r 1u k 6v3		

C331	2320779	Chipcap x7r 100n k 16v
C342	2320560	Chipcap np0 100p j 50v
C371	2320564	Chipcap np0 150p j 50v
C372	2320564	Chipcap np0 150p j 50v
C373	2320564	Chipcap np0 150p j 50v
C400	2320481	Chipcap x5r 1u k 6v3
C401	2320805	Chipcap x5r 100n k 10v
C405	2320544	Chipcap np0 22p j 50v
C406	2320805	Chipcap x5r 100n k 10v
C510	2320135	Chipcap x7r 150n k 10v
C511	2320135	Chipcap x7r 150n k 10v
C512	2320135	Chipcap x7r 150n k 10v
C513	2320135	Chipcap x7r 150n k 10v
C520	2320485	Chipcap np0 470p j 50v
C521	2320485	Chipcap np0 470p j 50v
C522	2320485	Chipcap np0 470p j 50v
C523	2320485	Chipcap np0 470p j 50v
C530	2320631	Chipcap np0 180p j 25v
C531	2320631	Chipcap np0 180p j 25v
C532	2320781	Chipcap x7r 47n m 16v
C533	2320781	Chipcap x7r 47n m 16v
C534	2320783	Chipcap x7r 33n k 10v
C535	2320546	Chipcap np0 27p j 50v
C540	2320556	Chipcap np0 68p j 50v
C541	2320556	Chipcap np0 68p j 50v
C550	2320598	Chipcap x7r 3n9 j 50v
C557	2320554	Chipcap np0 56p j 50v
C560	2320548	Chipcap np0 33p j 50v
C561	2320620	Chipcap x7r 10n j 16v
C562	2320546	Chipcap np0 27p j 50v
C564	2320783	Chipcap x7r 33n k 10v
C600	2320560	Chipcap np0 100p j 50v
C601	2320560	Chipcap np0 100p j 50v
C610	2320602	Chipcap np0 4p7 c 50v
C611	2320584	Chipcap x7r 1n0 j 50v
C612	2320556	Chipcap np0 68p j 50v
C613	2320556	Chipcap np0 68p j 50v
C614	2320556	Chipcap np0 68p j 50v
C615	2320560	Chipcap np0 100p j 50v
C620	2320805	Chipcap x5r 100n k 10v
C621	2320805	Chipcap x5r 100n k 10v
C630	2320530	Chipcap np0 5p6 c 50v
C631	2320530	Chipcap np0 5p6 c 50v
C640	2320516	Chipcap np0 1p5 c 50v
C642	2320584	Chipcap x7r 1n0 j 50v
C643	2320540	Chipcap np0 15p j 50v
C644	2320530	Chipcap np0 5p6 c 50v
C645	2320540	Chipcap np0 15p j 50v
C700	2320540	Chipcap np0 15p j 50v

C702	2320602	Chipcap np0 4p7 c 50v	
C703	2320526	Chipcap np0 3p9 c 50v	
C704	2320584	Chipcap x7r 1n0 j 50v	
C714	2320783	Chipcap x7r 33n k 10v	
C720	2320556	Chipcap np0 68p j 50v	
C730	2320546	Chipcap np0 27p j 50v	
C731	2320756	Chipcap x7r 3n3 k 50v	
C733	2320546	Chipcap np0 27p j 50v	
C741	2320540	Chipcap np0 15p j 50v	
C743	2320538	Chipcap np0 12p j 50v	
C746	2320548	Chipcap np0 33p j 50v	
C747	2320540	Chipcap np0 15p j 50v	
C754	2320620	Chipcap x7r 10n j 16v	
C755	2320481	Chipcap x5r 1u k 6v3	
C757	2320514	Chipcap np0 1p2 c 50v	
C758	2320584	Chipcap x7r 1n0 j 50v	
C759	2320546	Chipcap np0 27p j 50v	
C760	2320526	Chipcap np0 3p9 c 50v	
C761	2320536	Chipcap np0 10p j 50v	
C762	2320536	Chipcap np0 10p j 50v	
C782	2320524	Chipcap np0 3p3 c 50v	
C783	2312401	Chipcap x5r 1u0 k 10v	
C785	2320805	Chipcap x5r 100n k 10v	
C788	2320621	Chipcap np0 0p5 c 50v	
C790	2320518	Chipcap np0 1p8 c 50v	
C792	2320560	Chipcap np0 100p j 50v	
C793	2320540	Chipcap np0 15p j 50v	
C799	2320534	Chipcap np0 8p2 c 50v	
C801	2320564	Chipcap np0 150p j 50v	
C802	2312221	Chipcap np0 4n7 j 25v q4	Q4
C803	2320564	Chipcap np0 150p j 50v	
C804	2320518	Chipcap np0 1p8 c 50v	
C805	2610203	Chiptcap 2u2 m 10v 2.	2.
C829	2320560	Chipcap np0 100p j 50v	
C830	2320560	Chipcap np0 100p j 50v	
C831	2310793	Chipcap x5r 2u2 k 10v	
C832	2320620	Chipcap x7r 10n j 16v	
C833	2320584	Chipcap x7r 1n0 j 50v	
C834	2320584	Chipcap x7r 1n0 j 50v	
C835	2320540	Chipcap np0 15p j 50v	
C836	2320544	Chipcap np0 22p j 50v	
C860	2320548	Chipcap np0 33p j 50v	
C861	2320621	Chipcap np0 0p5 c 50v	
C862	2320520	Chipcap np0 2p2 c 50v	
C863	2320536	Chipcap np0 10p j 50v	
C864	2320524	Chipcap np0 3p3 c 50v	
L103	3203705	Ferrite bead 0.015r	42R/
L104	3203705	Ferrite bead 0.015r	42R/
L271	3203709	Ferrite bead 0.5r	120R/1

L272	3203709	Ferrite bead 0.5r	120R/1
L283	3640035	Filt z+AD4-450r/100m	0R7MAX
L284	3640035	Filt z+AD4-450r/100m	0R7MAX
L287	3203709	Ferrite bead 0.5r	120R/1
L503	3646051	Chip coil 3n9 +--0n3	Q28/
L504	3646063	Chip coil 22n j	Q28/800M
L505	3646051	Chip coil 3n9 +--0n3 q28/	Q28/
L506	3646053	Chip coil 4n7 +--0n3 q28/	Q28/
L510	3646059	Chip coil 5n6 +--0n3 q28/	Q28/
L553	4551013	Dir.coupl.897.5/1747.5mh	
L600	3646069	Chip coil 33n j q23/800m	Q23/800M
L631	3646065	Chip coil 12n j q31/800m	Q31/800M
L751	3203705	Ferrite bead 0.015r 42r/	42R/
L752	3645201	Chip coil 56nh j q38/200	Q38/200
L800	3645073	Chip coil 10u k 0.015a 1	1
B100	4510219	Crystal 32.768KHZ+--30PPM	
B301	5140157	Buzzer 85db 3000hz 3.0v	3.0V
G800	4350223	Vco 3420-3840mhz 2.7v 20	20
G830	4510261	Vctcxo 26mhz+--5ppm 2.7v	2.7V
F101	5119019	sm fuse f 1.5a 32v	0603
Z600	4511149	Dual saw filt	FILT925-960/180
Z620	4511149	Dual saw filt	FILT925-960/180
Z670	4550201	Dipl+2xsw 8w-960/1710-18	
Z671	4550067	Dipl 880-960/1710-1880mh	
Z700	4511147	saw filt	897.5+--17.5MHZ/
H400	9517046	Rf-can	dmd05114 nsm-3
T600	3640405	transf balun 900mhz10	900MHZ10
T630	3640421	transf balun 1.8ghz10	1.8GHZ10
T700	3640405	transf balun 900mhz10	900MHZ10
T740	3640421	transf balun 1.8ghz10	1.8GHZ10
T800	3640423	transf balun 3.7ghz30	3.7GHZ30
V100	1825023	Chip varistor vwm9v	VC20
V101	4210052	tr dtc114ee +ACoAKgAq- no new d	D
V104	4113671	tvS esda6v1w5 +ACoAKg- no new	NEW
V116	4110067	sch di mbr0520I +ACoAKg-no new	NEW
V250	4210100	tr bc848w n 30v 0.1a100m	0.1A100M
V251	4210100	tr bc848w n 30v 0.1a100m	0.1A100M
V252	4210052	tr dtc114ee +ACoAKgAq- no new d	D
V278	4110089	Dix2 bav70w cc 70v .5a	4
V321	4864561	led cl270hb blue 470nm	5
V322	4864561	led cl270hb blue 470nm	5
V323	4864561	led cl270hb blue 470nm	5
V324	4864561	led cl270hb blue 470nm	5
V331	4864551	led cl191b1 blue468nm	VF
V332	4864551	led cl191b1 blue468nm	VF
V333	4864551	led cl191b1 blue468nm	VF
V334	4864551	led cl191b1 blue468nm	VF
V335	4864551	led cl191b1 blue468nm	VF
V336	4864551	led cl191b1 blue468nm	VF

V350	4110089	Dix2 bav70w cc 70v .5a	4
V360	4110089	Dix2 bav70w cc 70v .5a	4
V730	4110014	sch di bas70-07 +ACoAKg	NEW
V800	4210100	tr bc848w n 30v	0.1A100M
V801	4210183	tr bfp193w n 8ghz	F1.3-2
V903	4210015	tr bfp405 n 4.5v12ma	20G
V904	4210074	tr bfp420 n 4.5v35ma	20G
V905	4210100	tr bc848w n 30v	0.1A100M
V907	4210100	tr bc848w n 30v	0.1A100M
D200	4370687	mad2wd1 v16 rom6	F741541
D210	4340747	Combomemory 16m	FLASH
N100	4370719	Ccont 2m	wfd163mg64t/8 l
N101	4370807	Chaps v3.1 tu01balt	
N220	4340413	tk11230bmc volt reg	3.0V
N250	4370793	Cobba+AF8-gjp v4.1	V257JG64T
N310	4370433	uiswitch sttm23av20t	
N400	4860081	irda rpm871-l1e2 115kbps	115KBPS
N401	4340335	tk11228am	REG2.8V+-80MV1
N505	4370731	hagar 4 sttza8ig	80t
N600	4340719	tk11247bmc volt reg 4.7v	4.7V
N702	4350203	pw amp 880-915/1710-1785	
S330	5209001	sm sw tact spst 12v	50MA
	9854538	PWB RM7LD	40.3X95.9X1.0

Parts list of RM7LD (EDMS Issue 3.3) Code: 0201682 layout 05

ITEM	CODE	DESCRIPTION	VALUE	TYPE
R100	1430826	Chipres 0w06 680k j		
R101	1430145	Chipres 0w06 100k f		200P
R102	1430796	Chipres 0w06 47k j		
R103	1430803	Chipres 0w06 4k7 f		200PP
R104	1430796	Chipres 0w06 47k j		
R109	1620017	Res network 0w06		2x100r
R110	1430826	Chipres 0w06 680k j		
R111	1430820	Chipres 0w06 470k j		
R118	1430778	Chipres 0w06 10k j		
R120	1620025	Res network 0w06		2x100k
R122	1620019	Res network 0w06		2x10k j
R124	1430726	Chipres 0w06 100r j		
R125	1430726	Chipres 0w06 100r j		
R128	1430718	Chipres 0w06 47r j		
R131	1419003	Chipres 0w5 0r22 j		200PP
R154	1430325	Chipres 0w06 2m2 j		
R201	1430812	Chipres 0w06 220k j		
R202	1430145	Chipres 0w06 100k f		200P
R203	1430803	Chipres 0w06 4k7 f		200PP
R211	1430778	Chipres 0w06 10k j		
R215	1430796	Chipres 0w06 47k j		
R216	1430796	Chipres 0w06 47k j		
R252	1430754	Chipres 0w06 1k0 j		
R256	1430718	Chipres 0w06 47r j		
R257	1430718	Chipres 0w06 47r j		
R258	1430744	Chipres 0w06 470r j		
R260	1430726	Chipres 0w06 100r j		
R261	1430744	Chipres 0w06 470r j		
R265	1430145	Chipres 0w06 100k f		200P
R266	1430806	Chipres 0w06 120k j		
R267	1430762	Chipres 0w06 2k2 j		
R268	1430744	Chipres 0w06 470r j		
R269	1620025	Res network 0w06		2x100k
R270	1430792	Chipres 0w06 33k j		
R271	1430145	Chipres 0w06 100k f		200P
R272	1430145	Chipres 0w06 100k f		200P
R273	1430792	Chipres 0w06 33k j		
R274	1430812	Chipres 0w06 220k j		
R275	1430762	Chipres 0w06 2k2 j		
R276	1430762	Chipres 0w06 2k2 j		
R277	1430145	Chipres 0w06 100k f		200P
R278	1430760	Chipres 0w06 1k8 j		
R281	1620017	Res network 0w06		2x100r
R285	1825021	Chip varistor vwm14v		VC4
R286	1825021	Chip varistor vwm14v		VC4

R287	1825021	Chip varistor vwm14v	VC4
R310	1430780	Chipres 0w06 12k j	
R311	1430778	Chipres 0w06 10k j	
R350	1430389	Chipres 0w1 18r j	
R351	1430389	Chipres 0w1 18r j	
R352	1430389	Chipres 0w1 18r j	
R353	1430389	Chipres 0w1 18r j	
R371	1430754	Chipres 0w06 1k0 j	
R372	1430754	Chipres 0w06 1k0 j	
R373	1430754	Chipres 0w06 1k0 j	
R374	1430754	Chipres 0w06 1k0 j	
R403	1430702	Chipres 0w06 12r j	
R404	1430702	Chipres 0w06 12r j	
R510	1620003	Res network 0w03	4x100r
R530	1620019	Res network 0w06	2x10k j
R532	1430846	Chipres 0w06 2k7 f	
R533	1430778	Chipres 0w06 10k j	
R541	1620033	Res network 0w06	2x5k6 j
R546	1620033	Res network 0w06	2x5k6 j
R563	1430187	Chipres 0w06 47k f	200PP
R564	1430746	Chipres 0w06 560r j	
R565	1430803	Chipres 0w06 4k7 f	200PP
R610	1430726	Chipres 0w06 100r j	
R611	1430846	Chipres 0w06 2k7 f	
R613	1430764	Chipres 0w06 3k3 j	
R614	1620017	Res network 0w06	2x100r
R640	1430732	Chipres 0w06 180r j	
R643	1430764	Chipres 0w06 3k3 j	
R645	1430846	Chipres 0w06 2k7 f	
R670	1430730	Chipres 0w06 150r j	
R671	1430730	Chipres 0w06 150r j	
R700	1430726	Chipres 0w06 100r j	
R704	1430726	Chipres 0w06 100r j	
R710	1430702	Chipres 0w06 12r j	
R711	1430734	Chipres 0w06 220r j	
R712	1430702	Chipres 0w06 12r j	
R723	1620505	Res network 0w04	2DB ATATT
R730	1430762	Chipres 0w06 2k2 j	
R731	1430740	Chipres 0w06 330r j	
R732	1430746	Chipres 0w06 560r j	
R740	1430726	Chipres 0w06 100r j	
R741	1430726	Chipres 0w06 100r j	
R742	1430726	Chipres 0w06 100r j	
R744	1430726	Chipres 0w06 100r j	
R751	1430734	Chipres 0w06 220r j	
R754	1430718	Chipres 0w06 47r j	
R755	1430714	Chipres 0w06 33r j	
R756	1430754	Chipres 0w06 1k0 j	
R757	1430754	Chipres 0w06 1k0 j	

R758	1430710	Chipres 0w06 22r j	
R763	1430740	Chipres 0w06 330r j	
R764	1430762	Chipres 0w06 2k2 j	
R790	1430803	Chipres 0w06 4k7 f	200PP
R791	1430756	Chipres 0w06 1k2 j	
R792	1430848	Chipres 0w06 12k f	
R800	1430778	Chipres 0w06 10k j	
R801	1430841	Chipres 0w06 6k8 f	
R802	1430803	Chipres 0w06 4k7 f	200PP
R805	1620505	Res network 0w04	2DB ATATT
R807	1430728	Chipres 0w06 120r j	
R829	1430752	Chipres 0w06 820r j	
R830	1430762	Chipres 0w06 2k2 j	
R831	1430718	Chipres 0w06 47r j	
R832	1430788	Chipres 0w06 22k j	
R833	1430762	Chipres 0w06 2k2 j	
R834	1430812	Chipres 0w06 220k j	
C101	2320548	Chipcap np0 33p j 50v	
C102	2320538	Chipcap np0 12p j 50v	
C103	2312411	Chipcap x5r 1u0 m 25v	
C104	2320783	Chipcap x7r 33n k 10v	
C105	2611719	Chiptcap 10u m 10v	2.0X
C106	2320481	Chipcap x5r 1u k 6v3	
C107	2320481	Chipcap x5r 1u k 6v3	
C108	2312401	Chipcap x5r 1u0 k 10v	
C109	2320544	Chipcap np0 22p j 50v	
C110	2320544	Chipcap np0 22p j 50v	
C113	2320508	Chipcap np0 1p0 c 50v	
C114	2320546	Chipcap np0 27p j 50v	
C116	2312401	Chipcap x5r 1u0 k 10v	
C119	2320481	Chipcap x5r 1u k 6v3	
C120	2320778	Chipcap x7r 10n k 16v	
C121	2320778	Chipcap x7r 10n k 16v	
C127	2320805	Chipcap x5r 100n k 10v	
C128	2312401	Chipcap x5r 1u0 k 10v	
C129	2312401	Chipcap x5r 1u0 k 10v	
C131	2611719	Chiptcap 10u m 10v	2.0X
C132	2611741	Chiptcap 4u7 m 10v	2.
C133	2320481	Chipcap x5r 1u k 6v3	
C140	2320481	Chipcap x5r 1u k 6v3	
C142	2611719	Chiptcap 10u m 10v	2.0X
C150	2320481	Chipcap x5r 1u k 6v3	
C151	2320481	Chipcap x5r 1u k 6v3	
C152	2320481	Chipcap x5r 1u k 6v3	
C153	2320481	Chipcap x5r 1u k 6v3	
C154	2320481	Chipcap x5r 1u k 6v3	
C160	2320546	Chipcap np0 27p j 50v	
C161	2320546	Chipcap np0 27p j 50v	
C162	2320540	Chipcap np0 15p j 50v	

C163	2320602	Chipcap np0 4p7 c 50v	
C164	2320536	Chipcap np0 10p j 50v	
C165	2611737	Chiptcap 68u m 16v	7.
C168	2320536	Chipcap np0 10p j 50v	
C201	2320783	Chipcap x7r 33n k 10v	
C203	2320778	Chipcap x7r 10n k 16v	
C204	2320778	Chipcap x7r 10n k 16v	
C205	2610203	Chiptcap 2u2 m 10v .	2.
C206	2320778	Chipcap x7r 10n k 16v	
C207	2320778	Chipcap x7r 10n k 16v	
C208	2320778	Chipcap x7r 10n k 16v	
C209	2320778	Chipcap x7r 10n k 16v	
C211	2320783	Chipcap x7r 33n k 10v	
C212	2320779	Chipcap x7r 100n k 16v	
C213	2320744	Chipcap x7r 1n0 k 50v	
C217	2320778	Chipcap x7r 10n k 16v	
C218	2320546	Chipcap np0 27p j 50v	
C220	2320778	Chipcap x7r 10n k 16v	
C247	2320778	Chipcap x7r 10n k 16v	
C248	2320481	Chipcap x5r 1u k 6v3	
C251	2320783	Chipcap x7r 33n k 10v	
C253	2320783	Chipcap x7r 33n k 10v	
C255	2320744	Chipcap x7r 1n0 k 50v	
C257	2320783	Chipcap x7r 33n k 10v	
C258	2320783	Chipcap x7r 33n k 10v	
C259	2320783	Chipcap x7r 33n k 10v	
C261	2320744	Chipcap x7r 1n0 k 50v	
C262	2320783	Chipcap x7r 33n k 10v	
C263	2320783	Chipcap x7r 33n k 10v	
C264	2320544	Chipcap np0 22p j 50v	
C268	2320481	Chipcap x5r 1u k 6v3	
C270	2610207	Chiptcap 10u m 6v3	2.
C274	2320544	Chipcap np0 22p j 50v	
C276	2320481	Chipcap x5r 1u k 6v3	
C278	2320544	Chipcap np0 22p j 50v	
C283	2320744	Chipcap x7r 1n0 k 50v	
C284	2320744	Chipcap x7r 1n0 k 50v	
C285	2320598	Chipcap x7r 3n9 j 50v	
C286	2320598	Chipcap x7r 3n9 j 50v	
C287	2320744	Chipcap x7r 1n0 k 50v	
C291	2320546	Chipcap np0 27p j 50v	
C292	2320546	Chipcap np0 27p j 50v	
C293	2320544	Chipcap np0 22p j 50v	
C294	2320744	Chipcap x7r 1n0 k 50v	
C295	2320744	Chipcap x7r 1n0 k 50v	
C296	2610207	Chiptcap 10u m 6v3	2.
C297	2610207	Chiptcap 10u m 6v3	2.
C310	2312401	Chipcap x5r 1u0 k 10v	
C330	2320481	Chipcap x5r 1u k 6v3	

C331	2320779	Chipcap x7r 100n k 16v
C342	2320560	Chipcap np0 100p j 50v
C371	2320564	Chipcap np0 150p j 50v
C372	2320564	Chipcap np0 150p j 50v
C373	2320564	Chipcap np0 150p j 50v
C400	2320481	Chipcap x5r 1u k 6v3
C401	2320805	Chipcap x5r 100n k 10v
C405	2320544	Chipcap np0 22p j 50v
C406	2320805	Chipcap x5r 100n k 10v
C510	2320135	Chipcap x7r 150n k 10v
C511	2320135	Chipcap x7r 150n k 10v
C512	2320135	Chipcap x7r 150n k 10v
C513	2320135	Chipcap x7r 150n k 10v
C520	2320485	Chipcap np0 470p j 50v
C521	2320485	Chipcap np0 470p j 50v
C522	2320485	Chipcap np0 470p j 50v
C523	2320485	Chipcap np0 470p j 50v
C530	2320631	Chipcap np0 180p j 25v
C531	2320631	Chipcap np0 180p j 25v
C532	2320781	Chipcap x7r 47n m 16v
C533	2320781	Chipcap x7r 47n m 16v
C534	2320783	Chipcap x7r 33n k 10v
C535	2320546	Chipcap np0 27p j 50v
C540	2320552	Chipcap np0 47p j 50v
C541	2320552	Chipcap np0 47p j 50v
C550	2320598	Chipcap x7r 3n9 j 50v
C557	2320554	Chipcap np0 56p j 50v
C560	2320548	Chipcap np0 33p j 50v
C561	2320620	Chipcap x7r 10n j 16v
C562	2320546	Chipcap np0 27p j 50v
C564	2320783	Chipcap x7r 33n k 10v
C600	2320560	Chipcap np0 100p j 50v
C601	2320560	Chipcap np0 100p j 50v
C610	2320602	Chipcap np0 4p7 c 50v
C611	2320584	Chipcap x7r 1n0 j 50v
C612	2320556	Chipcap np0 68p j 50v
C613	2320556	Chipcap np0 68p j 50v
C614	2320556	Chipcap np0 68p j 50v
C615	2320560	Chipcap np0 100p j 50v
C620	2320805	Chipcap x5r 100n k 10v
C621	2320805	Chipcap x5r 100n k 10v
C630	2320530	Chipcap np0 5p6 c 50v
C631	2320530	Chipcap np0 5p6 c 50v
C640	2320516	Chipcap np0 1p5 c 50v
C642	2320584	Chipcap x7r 1n0 j 50v
C643	2320540	Chipcap np0 15p j 50v
C644	2320530	Chipcap np0 5p6 c 50v
C645	2320540	Chipcap np0 15p j 50v
C700	2320540	Chipcap np0 15p j 50v

C702	2320602	Chipcap np0 4p7 c 50v	
C703	2320526	Chipcap np0 3p9 c 50v	
C704	2320584	Chipcap x7r 1n0 j 50v	
C714	2320783	Chipcap x7r 33n k 10v	
C720	2320556	Chipcap np0 68p j 50v	
C730	2320546	Chipcap np0 27p j 50v	
C731	2320756	Chipcap x7r 3n3 k 50v	
C733	2320546	Chipcap np0 27p j 50v	
C741	2320540	Chipcap np0 15p j 50v	
C743	2320538	Chipcap np0 12p j 50v	
C746	2320548	Chipcap np0 33p j 50v	
C747	2320540	Chipcap np0 15p j 50v	
C754	2320620	Chipcap x7r 10n j 16v	
C755	2320481	Chipcap x5r 1u k 6v3	
C757	2320514	Chipcap np0 1p2 c 50v	
C758	2320584	Chipcap x7r 1n0 j 50v	
C759	2320546	Chipcap np0 27p j 50v	
C760	2320526	Chipcap np0 3p9 c 50v	
C761	2320536	Chipcap np0 10p j 50v	
C762	2320536	Chipcap np0 10p j 50v	
C782	2320524	Chipcap np0 3p3 c 50v	
C783	2312401	Chipcap x5r 1u0 k 10v	
C785	2320805	Chipcap x5r 100n k 10v	
C790	2320518	Chipcap np0 1p8 c 50v	
C792	2320560	Chipcap np0 100p j 50v	
C793	2320540	Chipcap np0 15p j 50v	
C799	2320534	Chipcap np0 8p2 c 50v	
C801	2320564	Chipcap np0 150p j 50v	
C802	2312221	Chipcap np0 4n7 j 25v	Q4
C803	2320576	Chipcap x7r 470p j 50v	
C804	2320518	Chipcap np0 1p8 c 50v	
C805	2610203	Chiptcap 2u2 m 10v	2.
C829	2320560	Chipcap np0 100p j 50v	
C830	2320560	Chipcap np0 100p j 50v	
C831	2310793	Chipcap x5r 2u2 k 10v	
C832	2320620	Chipcap x7r 10n j 16v	
C833	2320584	Chipcap x7r 1n0 j 50v	
C834	2320584	Chipcap x7r 1n0 j 50v	
C835	2320540	Chipcap np0 15p j 50v	
C836	2320544	Chipcap np0 22p j 50v	
C837	2320526	Chipcap np0 3p9 c 50v	
C860	2320548	Chipcap np0 33p j 50v	
C861	2320621	Chipcap np0 0p5 c 50v	
C862	2320520	Chipcap np0 2p2 c 50v	
C863	2320536	Chipcap np0 10p j 50v	
C864	2320524	Chipcap np0 3p3 c 50v	
L103	3203705	Ferrite bead 0.015r	42R/
L104	3203705	Ferrite bead 0.015r	42R/
L271	3203709	Ferrite bead 0.5r	120R/1

L272	3203709	Ferrite bead 0.5r	120R/1
L283	3640035	Filt z>450r/100m	0R7MAX
L284	3640035	Filt z>450r/100m	0R7MAX
L287	3203709	Ferrite bead 0.5r	120R/1
L503	3646051	Chip coil 3n9 +-0n3	Q28/
L504	3646063	Chip coil 22n j	Q28/800M
L505	3646051	Chip coil 3n9 +-0n3	Q28/
L506	3646053	Chip coil 4n7 +-0n3	Q28/
L510	3646059	Chip coil 5n6 +-0n3	Q28/
L553	4551013	Dir.coupl.897.5/1747.5mh	
L600	3646069	Chip coil 33n j	Q23/800M
L631	3646065	Chip coil 12n j	Q31/800M
L751	3203705	Ferrite bead 0.015r	42R/
L752	3645201	Chip coil 56nh j	Q38/200
L800	3645073	Chip coil 10u k 0.015a 1	1
B100	4510219	Crystal	32.768KHZ+-30PPM
B301	5140157	Buzzer 85db 3000hz	3.0V
G800	4350273	vco 3420-3840mhz 2.7v	20
G830	4510261	vctcxo 26mhz+-5ppm	2.7V
F101	5119019	sm fuse f 1.5a 32v	0603
Z600	4511149	Dual saw filter	FILT925-960/180
Z620	4511149	Dual saw filter	FILT925-960/180
Z670	4550201	Dipl+2xsw880-960/1710-18	
Z671	4550067	Dipl 880-960/1710-1880mh	
Z700	4511147	SAW filter	897.5+-17.5MHZ/
H400	9517046	Rf-can	dmd05114 nsm-3
T600	3640405	Transf balun	900MHZ+/-10
T630	3640421	Transf balun	1.8GHZ+/-10
T700	3640405	Transf balun	900MHZ+/-10
T740	3640421	Transf balun	1.8GHZ+/-10
T800	3640423	Transf balun	3.7GHZ+/-30
V100	1825023	Chip varistor vwm9v	VC20
V101	4210052	Tr dtc114ee ***	D
V104	4113671	Tvs esda6v1w5 **	NEW
V116	4110067	Sch di mbr0520l **	NEW
V250	4210100	Tr bc848w n 30v 0.1a100m	0.1A100M
V251	4210100	Tr bc848w n 30v 0.1a100m	0.1A100M
V252	4210052	Tr dtc114ee *** no new d	D
V278	4110089	Dix2 bav70w cc 70v .5a 4	4
V321	4864561	led cl270hb blue 470nm 5	5
V322	4864561	led cl270hb blue 470nm 5	5
V323	4864561	led cl270hb blue 470nm 5	5
V324	4864561	led cl270hb blue 470nm 5	5
V331	4864551	led cl191b1 blue468nm	VF
V332	4864551	led cl191b1 blue468nm	VF
V333	4864551	led cl191b1 blue468nm	VF
V334	4864551	led cl191b1 blue468nm	VF
V335	4864551	led cl191b1 blue468nm	VF
V336	4864551	led cl191b1 blue468nm	VF

V350	4110089	Dix2 bav70w cc 70v .5a 4	4
V360	4110089	Dix2 bav70w cc 70v .5a 4	4
V730	4110014	Sch di bas70-07 **	NEW
V800	4210100	Tr bc848w n 30v	0.1A100M
V801	4210183	Tr bfp193w n 8ghz	F1.3-2
V903	4210015	Tr bfp405 n 4.5v12ma	20G
V904	4210074	Tr bfp420 n 4.5v35ma	20G
V905	4210100	Tr bc848w n 30v	0.1A100M
V907	4210100	Tr bc848w n 30v	0.1A100M
D200	4370687	mad2wd1 v16 rom6	F741541
D210	4340747	Combomemory 16m	FLASH+2M
N100	4370719	Ccont 2m wfd163mg64t/8 l	L
N101	4370807	Chaps v3.1 tu01balt	
N220	4340413	Tk11230bmc volt reg	3.0V
N250	4370793	Cobba_gjp v4.1	V257JG64T
N310	4370433	uiswitch sttm23av20t	
N400	4860081	irda rpm871-l1e2	115KBPS
N401	4340335	Tk11228am	REG2.8V+-80MV1
N505	4370781	hagar 5 tzc6begt	
N600	4340719	Tk11247bmc volt reg	4.7V
N702	4350203	pw amp 880-915/1710-1785	
S330	5209001	sm sw tact spst 12v	50MA
	9854538	PWB RM7LD	40.3X95.9X1.0

Hardware ID chart for NSM–3/3D System module

Parts lists in service manual

NSM–3 Part code 0201386

HWID for RM7L	EDMS issue parts list version	PWB version
1120	6.0	RM7L_11
1210 – 1621	10.1	RM7L_12 – 16
1800	11.2	RM7L_18
1903 – 2000	12.5	RM7L_19 – 20
2100 – 2103	13.5	RM7L_21

Note: Bold type in service manual

NSM–3D Part code 0201682

HWID for RM7LD	EDMS issue parts list version	PWB version
3.01	2.1	RM7LD_03
3.02	2.4	RM7LD_03
5.01	3.2	RM7LD_05
5.02	3.3	RM7LD_05

□ 1